

**Dividend Policy and Private Shareholders:
A New Zealand Survey.**

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Abstract

The main focus of this thesis was to learn about the individual investor and their view of dividends. It set out to investigate whether private investors regard dividends as important (to themselves personally or as a signal of the company's performance) and also how dividends impact upon a company's value. The subject group is one which has been neglected by previous finance research as very little is known about their demographics and investing practices.

Five major areas of dividend research were examined. These were: do investors believe that dividends affect the value of the share, how they prefer to obtain their income from shares, the reasons for dividend increases and decreases, whether dividend changes (increases and decreases) occur for different reasons and whether an age clientele effect exists. Most of these problems have been investigated previously by other researchers, but few have used individual investors to analyse these areas.

A survey of 280 private investors tested these questions and concluded that private investors believe that dividends do affect the value of a share, dividends were perceived to be a safer form of income (but capital gains is preferred), that dividend increases and decreases occur because of different reasons (mostly related to profitability or liquidity) and that an age clientele does exist. Most significantly, this analysis revealed that investors behave in a way best described by Lintner's view of dividend policy, as they: prefer higher dividends to lower dividends, believe dividends are a safer form of income and believe that dividends affect the value of a share.

Introduction

Introduction

Optimal Dividend Policy theory has been a topic of academic debate since its development. According to Farrelly and Baker (1989, Pg 92) three main theories have been proposed to explain dividend policy and its effect on company valuation. These are; those who believe that dividends positively affect the value of a share (the rightists); those who believe that dividends have no relationship to the value of a share (the middle group) and those who believe that in certain circumstances, a higher dividend should decrease the value of a share (the leftists).

A basic assumption behind each of these three theories is the concept of a rational, profit maximising investors. However, little research has focused on investor behaviour, especially private investors. Lease, Lewellen and Schlarbaum (1974) suggest that academics know very little about the individual shareholder. Since their research, little work has studied the attributes and attitudes of private shareholders'.¹ Many studies have used simulation and indirect methods instead of observing investors to obtain information. Shefrin and Statman (1984 pg 278) state:

Financial theory has tended to ignore the question of how individual investors actually behave, concentrating instead on how asset prices are determined.

Although these two groups have analysed shareholder behaviour, they did not investigate individual shareholders' and optimal dividend policy. The series of articles co-authored by Lease, Lewellen and Schlarbaum analysed the demographics of American investors, and the clientele effect while Shefrin and Statman studied investor psychology.

Current research still neglects private investors, as Warren, Stevens and McConkey (1990, Pg 74) comment that "*little empirical research exists concerning individual*

¹ Shefrin and Statman (1984) appear to contradict this, but even these researchers used the data obtained from Lease, Lewellen and Schlarbaum's survey.

investment behaviour". According to these authors, the available literature tends to be in the form of "*nonquantitative essays*" based on the individual writers' experiences (such as a sharebroker) with private investors. However, very few researchers analysed the "*attitudes, opinions and activities*" of individual investors and their investment decisions.

The Research Question

The most important goal of this thesis is to analyse a much neglected investing group, private investors. Currently, little information is available about this group, regarding their:

- rationality,
- investing preferences,
- demographics,
- attitudes towards dividend policy.

Although this research does not investigate all these areas, it will help fill a gap in the current field of knowledge.

The specific objective is to analyse these three proposed dividend theories and determine whether private investors' behaviour in New Zealand is consistent with one these proposed theories.

The research surveys New Zealand shareholders to determine their attitudes regarding dividend theory and company valuation.

Value of Thesis

This thesis will be of value to dividend theory research as it investigates dividend policy using an approach not used before. To date, it has been assumed that shareholders are rational and follow these theories, however this remains unproven.

By directly investigating shareholders' (rather than the indirect methods favoured by other researchers), this research examines their attitudes towards dividends and company valuation. If their opinions and responses are consistent with the proposed theories this will add to the evidence in favour of that theory. As Partington (1989) comments, such results are useful as they provide a basis for triangulation. However, if the results differ from these three theories, then it may be that previous research may be misspecified in some manner.

Outline of Thesis

The thesis is divided into six main sections (four parts).

The first section of this thesis reviews the literature available regarding current dividend policy research. It focuses on the three optimal dividend policies, the information signalling hypothesis and the clientele effect.

The second section is very significant as it collates the literature available about private investors and what is known about them. This summarises the literature about investor rationality, private shareholders investing strategies, past attempts using private investors to analyse dividend theory, and the significance of private investors.

The third section outlines the five main hypotheses that this thesis tests. It again summarises the available literature regarding dividend research, but focuses on how the attitudes of private investors may differ from other classes of investors, thus causing different results.

The fourth section details the literature and process of designing the survey which was sent out to a random group of New Zealand shareholders. It summarises the design of the survey, the shareholder selection procedures and conducts an investigation of non-response bias.

The fifth section summarises the results of the survey and compares the results to the hypotheses. It investigates whether the hypotheses are accepted or rejected. If they are rejected, it attempts to explain why this occurred.

The final section is a summary of all the results collected. It summarises the results of the hypotheses which are tested, demographic information which has been collected, other information which has been discovered and the optimal dividend policy which the evidence gained appears to be most consistent with.

Part I:
Literature Review

Optimal Dividend Policy

Academic views on optimal dividend policy follow one of three main conceptual positions: the traditional view,¹ the "middle of the road" view, and the radical view.² The traditional view contends that the dividend payout rate has a positive correlation to the price of the share. The "middle of the road" view argues that dividends are irrelevant and the "radical left" view argues that dividend policy should be designed to suit the tax regime.

Traditional Rightists'

The rightist group is considered a conservative group who contends that an increase in a dividend payout will increase a firm's value. According to Brealey and Myers (1991, Pg 376), most traditional finance literature supports this assertion.

Myron Gordon and John Lintner were two early proponents on this school. The main argument behind this theory is that dividends represent a safer form of income than capital gains, as they receive the income earlier³ and have the assurance of an income.

Lintner, after his survey of American managers, summarised some of the important elements involved in setting dividends. Brealey and Myers (1991) summarise these into what they term "*four stylised facts*". These are:

- 1 Firms have long run target dividend payout ratios.
- 2 Managers focus more on dividend changes than on absolute levels.
- 3 Dividend changes follow shifts in long run, sustainable earnings and managers "smooth" dividends to maintain a pattern.

¹ Also known as the rightists.

² Also known as the leftists.

³ Rather than having to wait to sell the shares.

- 4 Managers are reluctant to make dividend changes that they may have to reverse.

Miller and Modigliani referred to this argument as the 'bird in the hand fallacy' because most investors reinvest their dividends back into shares. This makes the dividend unnecessary as investors rely on capital appreciation for their income.

There has been extensive research into Lintner's assertions about optimal dividend policy. The most common form of research has been an attempt to replicate Lintner's survey of managers' to determine their attitudes regarding dividend policy. Such examples are Alexander and Blanchard (1992), Baker and Farrelly (1988), Kerdelmelidis and Juchau (1989) and Baker, Farrelly and Edelman (1985).

The results from most of this research are consistent with Lintner's view of dividend policy. Baker and Farrelly (1988, Pg 84) found that the most important reason for paying dividends was to meet "*stockholders' expectations for continued dividend growth and maintaining or increasing stock price*". This shows that continued dividend growth and the maintenance of the stock price may not be independent. Failure to maintain dividends could result in "*stockholder disappointment*" and a drop in the company's share price.

Another important piece of research corroborating Lintner's theory was that of Farrelly and Baker's (1989). These two surveyed security analysts and found their responses were similar to those of dividend policy makers. Institutional investors who responded to their survey felt dividends were important. This result was not surprising to these two researchers, as most corporations pay "*much attention to the continuity and consistency of dividends, presumably in order to hold the confidence of stockholders*". Research shows that attention to dividends is worthwhile, as investors perceive that dividend policy changes are correlated to share price changes.

One group of researchers, Jose and Stevens (1989, Pg 659) located a relationship between dividend policy and a firm's share price. According to their analysis, share price premiums were associated with stable and steadily growing dividends. This result was consistent with Lintner's 'four stylised facts'.

However, proponents of the other schools use the share price reaction to dividend changes to argue their case. According to Marakyan and Carroll (1991, Pg 62) supporters of dividend relevance interpret the share price reaction to a dividend initiation as evidence that investors prefer higher dividends.⁴

Two Australasian based studies produced mixed results regarding the applicability of the rightist school on dividend policy. Kerdelmidis and Juchau (1989, Pg 52) found that managers believed shareholders had an entitlement to a fair share of company's earnings through dividends. However, Alexander and Blanchard (1992, Pg 6) found contradictory results as New Zealand managers, unlike their American counterparts, did not place a high level of importance on stable dividends. Therefore, the role of a target payout ratio when setting dividends appears uncertain in New Zealand.

One interesting and significant relationship of the traditional rightist school and dividend policy is its possible connection to information signalling theory. According to Healy and Palepu (1988, Pg 151) their results were consistent with Lintner's observation that *"managers consider past, current and future earnings when making dividend policy decisions"*. Since managers consider future earnings when setting dividends, changes in dividend policy should signal changes in managements' expectations of future earnings. Although New Zealand managers reject Lintner's dividend theory, according to Alexander and Blanchard (1992, Pg 7), their views are favourable towards signalling theory.

⁴ However, the opponents argue that the reason for the stock price change is the information content of the announcement.

Middle Group

The dividend irrelevance theory is a "*middle of the road*" theory according to Brealey and Myers (1991). The developers of this theory, Merton Miller and Franco Modigliani argued that dividends are irrelevant, as they do not affect a firm's value or cost of capital. Therefore, there is no optimal dividend policy as one policy is as good as another.

According to Miller and Modigliani (1961, Pg 425) this should be obvious, as a change in dividend policy implies "*a change only in the distribution of the total return in any period as between dividends and capital gains. If investors behave rationally, such a change cannot affect market valuations*". Black (1976) states that this is the essence of the Miller and Modigliani theorem. Dividends do not affect the value of shares or investors' returns "*because the higher the dividend, the less the investor receives in capital appreciation, no matter how the corporation's investments turn out*".

Miller and Modigliani reasoned that companies are valued by their earning power and risk class. Brigham and Gapenski (1991, Pg 529) summarise this view as they state that a firm's value depends on its "*asset investment policy rather than on how earnings are split between dividends and retained earnings*". This contradicts Lintner who argued that the disbursement of dividends to the shareholder has value.

Miller and Modigliani developed their theory for a world without taxes or transaction costs. Brigham and Gapenski summarise the five assumptions under which the theory was developed. These assumptions are:

- 1 No personal or corporate income taxes.
- 2 No stock flotation or transaction costs.
- 3 Dividend Policy has no effect on the firm's cost of equity.
- 4 The firm's capital investment policy is independent of its dividend policy.

5 Investors and managers have the same set of information (symmetric information) regarding investment opportunities.

Miller and Modigliani argue that this is what will occur given these assumptions and if investors act rationally and provide examples of where the theory may not apply. One example is the clientele effect, where investors gravitate towards a company because of its dividend policy. However, they commented that one clientele was as good as another.

Another example is the information signalling hypothesis as dividends may signal management's intentions and beliefs about the future prospects of the company to investors. Miller (1989, Pg 104) argued that managers' decisions regarding dividends may provide signals to investors, but changing the dividend "*would not affect the total return of cash plus appreciation*". According to Brealey and Myers (1991, Pg 383), Miller and Modigliani regarded the informational content of dividends as temporary.

From their observations, Miller and Modigliani (1961, Pg 428) noted that speculative bubbles did occur in the sharemarket and that these events received significant media coverage. However, these authors commented when these 'bubbles' occurred they are not a "*dominant, or even a fundamental, feature of actual market behaviour under uncertainty*". Therefore, in the long run the market would follow their postulates.

According to Brealey and Myers (1991, Pg 377), most academics accept Miller and Modigliani's reasoning as correct.⁵ However, the debate about this theory's relevance is now over whether taxes or other market imperfections alter this theory's application. Brigham and Gapenski (1991, Pg 529) comment that the Miller and Modigliani assumptions "*are not realistic, and they obviously do not hold precisely*". Therefore their conclusions on dividend irrelevance may not be valid under real world conditions.

⁵Given its strict assumptions.

Huberman (1990, S106) agrees in principle as he observes their "*argument is suspicious in the presence of transaction costs*".

Brealey and Myers (1991, Pg 391) state that Miller and Modigliani's theory, like most other optimal dividend theories, is "*too incomplete ... to warrant any dogmatism*", but their sympathies lie with the middle of the road view. Although dividends are more predictable than capital gains, the important point is; so long as investment policy and borrowing remains constant, a firm's cash flow is the same regardless of payout policy. Also, shareholders' should be indifferent between the two forms of income, as they can sell a parcel of their shares to obtain what Shefrin and Statman (1984, Pg 253) termed a 'homemade' cash dividend.

However, one group who have uncovered empirical evidence consistent with Miller and Modigliani's propositions are Jose and Stevens (1989). Their analysis (which also supported Lintner's propositions) confirms the classic irrelevance theory to the extent "*that the levels and trends of payout ratios are not associated with market value premiums*". That is, higher dividend payouts trends that were not matched by high earnings did not cause a share to trade at a premium. The market valued firms by their earning capacity and not their payout policy.

These researchers claim that the 'constant dividend's premium', as described by Lintner, can coexist with Miller and Modigliani's classic dividend irrelevance hypothesis.

Radical Left

According to Brealey and Myers (1991, Pg 377), the leftist group pushed Miller and Modigliani's argument of dividend irrelevance towards the 'centre'. The leftists' position takes its basis from Miller and Modigliani's argument, but modifies it to take account of taxes and transaction costs. Brealey and Myers state that the left wing dividend creed is simple:

Whenever dividends are taxed more heavily than capital gains, firms should pay the lowest cash dividend they can get away with. Available cash should be retained and reinvested or used to repurchase shares.

Brigham and Gapenski (1991, Pg 532) state that Litzenberger and Ramaswamy are the main proponents of this school. Their position is normally perceived to be the reverse of Gordon and Lintner. This group argues for a tax and transaction cost based dividend policy, as a firm should set dividends in order to maximise shareholders' net results from their investing activities. Accordingly firms' should attract a clientele of investors whose tax brackets align to its own dividend policy.⁶

The idea of setting dividends according to the effective tax rates (on dividends and capital gains respectively) has been noted by many researchers. Black (1976, Pg 6) argued that with taxes, investors and corporations are no longer indifferent to the level of dividends. Pettit (1977, Pg 421) states that with market imperfections:

the investor will select the optimal level of consumption and the optimal investment portfolio in view of the influence of these factors on net returns and the level of wealth.

All things being constant, investors with dividend tax rates in excess of the capital gains tax rate should own shares with a relatively low dividend yield, and vice versa when the capital gains tax rate is higher than the dividend tax rate.

The effect of transaction costs on optimal dividend policy has not received the same attention that the tax clientele effect has. Shefrin and Statman (1984, Pg 274) comment that transaction costs, such as brokerage commissions, can make it more efficient for investors to gain their income from dividends rather than sell shares and pay brokerage commissions.

Most research in this area supports the idea that investors will align themselves with a company whose dividend policy suits their own tax bracket. Litzenberger and

⁶ Miller and Modigliani hypothesised that shareholders would gravitate towards a firm whose dividend policy was to their personal satisfaction, and that one clientele is as good as another.

Ramaswamy (1979) found results compatible with the existence of a clientele effect. Pettit (1977) also found support for the existence of a dividend clientele effect which was partly due to the different rates of tax on dividends and capital gains. However, Baker, Farrelly and Edelman (1985, Pg 82) only found slight agreement that shareholders invest in firms with dividend policies appropriate to their tax environment. Although, in a later article, Baker (1989) argued that a perceived preference for capital gains, rather than dividends by shareholders, is due to the lower tax rates on capital gains than dividend income.

Currently tax rates for dividends and capital gains are similar in most countries now (apart from New Zealand). As a result investors should be indifferent as to their income source if the gross returns achieved are the same. Alexander and Blanchard (1992, Pg 7) found that New Zealand financial managers rejected the notion that companies paying a low dividend attract shareholders in higher tax brackets, but stated this may be due to the dividend imputation system.

Transaction costs may only have a limited effect on dividend policy. Black (1976, Pg 6) argues that if transaction costs are too high then corporations can arrange for automatic share repurchase plans to allow the investor to have a cash disbursement and therefore *"transaction costs don't tell us much about why corporations pay dividends"*.⁷ According to Shefrin and Statman (1984, Pg 274), transaction costs undoubtedly play some role in the preference for dividends, however do *"not appear to provide a major (let alone complete) explanation of the phenomenon"*.

Mixed Support for the leftist view exists. The majority of research agrees that dividend clienteles do exist. However Litzenberger and Ramaswamy (1982, Pg 443) question whether clienteles are attributable to taxes or *"some omitted variables"*.

⁷With the introduction of the new Companies Act in the middle of 1994, this will become applicable to New Zealand.

Information Signalling

Modigliani and Miller were the first academics to hypothesise that dividends may convey information (see Watts 1973). The underlying principle of their argument was that dividend policy⁸ may convey information about managers' expectations of the future prospects of the company. This occurs, according to Baker and Haslem (1974, Pg 1259), because investors "*may realise that a firm's reported earnings are not necessarily representative of reasonable and valid estimates of its true earnings*". Therefore investors may rely on some other form of information, such as dividends, to obtain a forecast of managements' intentions.

Miller and Modigliani (1961, Pg 430) stated that when a firm has maintained a relatively stable dividend, then investors "*are likely to (and have good reason to) interpret a change in the dividend rate as a change in management's views of future profit prospects for the firm*". The core of this argument, according to Miller (1987, Pg 14), is that managers know more about the prospects of the firm (termed asymmetric information).

To date, researchers are unsure of the actual information and price effects of dividend policy. However, what they do know, according to Ghosh and Woolridge (1988, Pg 281) is that the valuation effect of a reduction in dividends frequently exceeds the effect of a comparable increase. Therefore "*dividend cuts contain more information*" than a dividend increase. They cite managerial reluctance to cut dividends to be the reason for this

Most empirical research on the information signalling effect has either used aggregate market based studies to test for the market reaction of dividend changes, or has directly surveyed managers⁹ to ascertain their attitudes regarding information signalling. A third

⁸Especially changes in the dividend.

⁹Following Lintner's style.

methodology employed is to analyse the change in a company's earnings following a dividend change.

Using a market based study, Asquith and Mullins (1983) found evidence which supports the view that *"dividends convey to investors valuable information in addition to that contained in contemporaneous information sources"*. The benefits to investors of this information appeared to outweigh the costs associated with paying dividends. Another study analysing market data was conducted by Healy and Palepu (1989). They were able to locate a positive reaction to the announcement of dividend initiations showing that dividend changes provide signals to investors.

Research that has applied the managerial survey technique reveals that managers do believe that dividends convey information. In one such study, Baker, Farrelly and Edelman (1985) found that U.S. managers' believed that dividend policy contained information about the future prospects of the company. Baker and Farrelly (1988) conducted a similar study and found that dividend changes provide signals to investors, and that this may effect share prices. According to these two authors', investors interpret dividend changes as signals *"since most companies increase dividends only when there is a high degree of confidence that the new payout can be sustained"*. However, they did note that firms are reluctant to decrease dividends *"even when the outlook warrants it"*.

Another methodology used to analyse the signalling phenomenon is to examine the changes occurring within a company's profitability after it unexpectedly changes dividends. Manakyan and Carroll (1990 and 1991) applied such a technique. They noted that the empirical evidence linking dividends changes to a firm's subsequent earnings performance is *"sparse, and inconsistent at best"*.

The purpose of their studies was to address the reliability of signals and to see whether dividend changes are followed by changes in earnings. The 1990 study showed that

dividend changes are followed by changes in earnings in the following periods.¹⁰ Manakyan and Carroll found that both the direction and magnitude of the 'unexpected change' in dividends was consistent with the direction and magnitude of the unanticipated change in earnings.¹¹

In their 1991 analysis, these authors analysed the relationship between structural changes in earnings and dividend policy. Again this paper found that a relationship existed between dividend policy and future earnings, as a weak link between dividend signals and subsequent earnings performance existed. However, this relationship was only statistically significant for a third of the firms (and only occurred for some firms). In addition, these authors noted that changes in earnings structure were most apparent when unfavourable information is being conveyed.

Two Australasian surveys have analysed managers' and obtained results consistent with the information signalling theory. Kerdelmelidis and Juchau (1989) found that although New Zealand shareholders may be indifferent to their form of income, the information content of dividends is significant as it helps to "*meet market expectations and to maintain confidence in the market*". Alexander and Blanchard (1992, Pg 7) performed a similar study and found New Zealand managers' to be, "*at best lukewarm*" to the idea that dividends provided a signal of the firms future prospects.

Two Australian authors, Hamson and Ziegler (1990, Pg 41) analysed the impact of the recently introduced dividend imputation system may have on dividend signalling theory. They observed that dividend imputation has no direct impact on dividend signalling, as a higher dividend payment should reflect management's confidence in the future profitability of the firm. These authors noted that there may be an indirect effect

¹⁰Subsequent two quarters.

¹¹So a larger and more positive unanticipated change in dividends was associated with a larger and more positive increase in earnings.

on information signalling, as the availability of imputation credits may alter the level of dividends that a firm chooses to pay.¹²

Few academics disagree with the proposition that a company's dividend policy can convey information. Of those who do, most of their research is theoretical in nature. In an early study, Watts (1973, Pg 211) concluded that *"in general, the information content of dividends can only be trivial"*. According to this author the information which managers use in setting dividends is *"lost in the noise in the dividend model"*. Litzenberger and Ramaswamy (1982, Pg 443) who conducted a more empirical study¹³ commented that the significant yields obtained on shares *"cannot be pinned to the information content"*.

One of the major advantages of dividend signalling, according to Black (1976), is that it may tell investors more about what managers' really think. If the managers' forecasts are reliable, then a firm's dividend policy should convey information. Brigham and Gapenski (1991, Pg 535) note that like most other aspects of dividend policy, empirical studies of signalling effects have been inconclusive, but it is evident that dividend announcements do convey information. However, it remains difficult to tell whether stock price changes following dividend changes reflect *"only signalling effects or both signalling and dividend preference effects"*.

¹²This is true in New Zealand, as companies attempt to maintain a policy of paying fully imputed dividends.

¹³ Although they were mainly analysing the clientele effect.

Clientele Effect

According to Miller and Modigliani (1961, Pg 431) the clientele effect is an example how market imperfections (such as brokerage fees or taxes) could bias individual investors towards preferring a particular dividend policy. These imperfections are not sufficient for a certain dividend policy to "*command a permanent premium in the market*". Each company attracts a "clientele" of those preferring its particular dividend policy, but when valuing a company, the clientele effect is irrelevant.¹⁴

However, according to Crockett and Friend (1988, Pg 603) a major puzzle in finance is why firms pay dividends instead of retaining the earnings or repurchasing shares.¹⁵ The contrast occurring between the predictions of theory and observed behaviour "*is so striking as to raise serious questions of investor / and or firm rationality*".

Since Miller and Modigliani established this argument, clientele research has analysed the effect that taxes, transaction costs and the individual investors' circumstances could have on influencing their choice of investment. Clientele effect research has not limited itself to analysing the tax induced clientele effect or age effect as suggested by Miller and Modigliani, but has also investigated financial leverage clienteles and other types of clienteles.

Most research investigating the clientele effect has relied on surveys to obtain the data. A large proportion of these analysed individual investors to obtain information regarding their individual circumstances and investing policies. There is a form of bias in this research as the survey performed by Lease, Lewellen and Schlarbaum in mid 1972 forms the majority of the data used to analyse the clientele effect.

¹⁴ As the company's valuation is independent of its dividend policy.

¹⁵ Due to the tax differential which favours capital gains

The results of these studies shows that age is the most notable factor causing a clientele effect as a significant relationship exists between an investor's age and investing pattern. In one of their many studies Lease, Lewellen and Schlarbaum (1976) found that as the age of the investor increased (from the youngest classification to the oldest), short term capital gains diminished in importance and dividend income becomes more important. Also, as the investor's age increased, they held more diversified portfolios and invested in lower risk opportunities.

Crockett and Friend (1988, Pg 604) agree as they state that one investor subgroup (elderly) may rationally prefer dividends. This subgroup holds a rising share of the stock owned by individuals and are probably subject to relatively low taxes. They may prefer dividend income, and be considered rational investors (in the classical sense).

Other studies have found similar results, Lewellen, Stanley, Lease and Schlarbaum (1978) found the most important characteristic when determining dividend preference to be the investor's age. A possible explanation for the higher concentration of older investors around high dividend stocks are transaction costs; as they would not have to sell stock (and incur the transaction cost) to obtain income. Pettit (1977) performed a similar analysis¹⁶ and gained similar results. His results indicated a significantly positive relationship between dividend yield and age. Age had a negative correlation to income and this corresponded to the increased dissaving of individuals as they got older (retirement).

Clientele research has analysed many other individual characteristics of individual investors. However these characteristics did not receive such consistent results. Such examples are that Lewellen, Stanley, Lease and Schlarbaum (1978, Pg 1393) noted that female investors preferred high dividend yield stocks, and that the investor's

¹⁶ Again using the same data as collected by Lease, Lewellen and Schlarbaum.

employment status¹⁷ correlated to their choice of investment. Cohn, Lewellen, Lease and Schlarbaum (1975, Pg 610) found married individual tended to invest less in risky assets than single individuals.¹⁸

The tax induced clientele effect has been another area of interest in this research. It is one of the primary examples given by Miller and Modigliani as to why investors may prefer a certain dividend policy in the market.¹⁹ Litzenberger and Ramaswamy extended this argument to become one of the three conflicting optimal capital structure theories. They argued that firms should set their dividend policies according to the tax differential between capital gains and dividend income.

In several articles (1979, 1980 and 1982), Litzenberger and Ramaswamy concluded that a tax induced clientele effect did exist. According to these authors, stockholders in higher tax brackets chose shares with low dividend yields, and vice versa. However, they commented that more research must occur before the implications of this theory are capable of being tested.

One methodology used to analyse the tax clientele effect is to examine the specific price change occurring when a dividend change occurs. According to many researchers, the price of a share will drop by the amount of the dividend, less the marginal tax rate of that firm's clientele. As the dividend policy changes, the previous clientele will sell their shares and buy shares in a company whose dividend policy is more suitable for their tax brackets. Meanwhile, the new dividend policy should become attractive to a new class of investor. Therefore, the change in the price should reflect the marginal tax difference between these two clienteles.

¹⁷ This category included whether the individual was employed, unemployed and retired. The employment category was further split into employment in a non profit or profit making firm.

¹⁸ Other things being equal.

¹⁹ With its imperfections such as taxes and transaction costs.

An early study to use this methodology was that of Elton and Gruber (1970, Pg 73). Their results showed that firms attract a clientele based on the taxation implications of each company's dividend policy. However, other researchers using this technique are unsure whether it is applicable. Kalay (1982, Pg 1068) comment that it is impossible to infer the marginal tax rates of investors from the relative price drop in a share's price at the time of a dividend change. Therefore, the documented ex-dividend day behaviour of stock prices is not necessarily evidence of a tax effect or a clientele effect. A further study having a similar conclusion was conducted by Gagnon and Suret (1991, Pg 255). These authors suggest that the variability in prices caused by a dividend change is so large that it is impossible to assess marginal tax rates or to detect dividend tax clientele effects

Most other research analysing the tax induced clientele effect used survey data to obtain the information, and the results are somewhat contradictory. On one hand, Pettit (1977, Pg 432) found evidence supporting a dividend clientele effect which was "*due to both relative desires for consumption and different rates of tax on dividends and capital gains*". However, other research (some using the same data) found little evidence to support the existence of a tax induced clientele effect. According to Lewellen, Stanley, Lease and Schlarbaum (1978) they were unable to locate "*much evidence to support the notion than an important dividend tax clientele effect is in fact present*". Baker, Farrelly and Edelman (1985), in their survey of managers,²⁰ found "*slight agreement*" that investors find dividend policies appropriate to their tax environment more attractive. Finally, Crockett and Friend (1988, Pg 603 - 604) state that the "*available evidence indicates that tax clientele effects are surprisingly weak*".

Another area for analysis has been the tax induced leverage clienteles. According to Kim, Lewellen and McConnell (1979), an important implication from Miller's analysis is that individuals will sort themselves into tax induced financial leverage clienteles.

²⁰ Unlike the survey of private investors used by both Pettit and Lewellen, Stanley, Lease and Schlarbaum.

This occurs when individuals in low income tax brackets will hold shares in firms having highly levered capital structures and vice versa for individuals in high income tax brackets. However, they concluded that firms do not attract distinct groups of investors on the basis of their debt to capital ratios and that 'other factors' could outweigh the leverage clientele tendencies in the market.

A final factor highlighting the existence of a clientele effect has been the introduction of the imputation credit regime. According to Wills (1991, Pg 36) the introduction of dividend imputation in Australia resulted in a "*shift of shareholder preference away from profit retention to more generous dividend distributions*". This author states that dividend imputation has created "*different groups of shareholders*" who prefer particular dividend and franking combinations. However, this effect may not be so apparent in New Zealand as there is no capital gains tax on share transactions^{21 22} and that shareholders who qualify for the pension have to pay a sur charge if their income reaches a certain level.²³ This may make these investors prefer to receive income from capital gains and may undermine the age clientele effect.

Although, much of the research performed on clientele effects is very inclusive, there is sufficient evidence to suggest they exist. As Lease Lewellen and Schlarbaum (1976) comment, "*investors do align themselves with particular investment philosophies and distinct market segments, and apparently that alignment is systematically related to their individual circumstances*". The clientele effect having most empirical support is the age clientele effect, for as investors get older, they prefer income in the form of dividends. A possible explanation of this is the transaction costs involved with selling shares. Younger investors (termed "accumulators" by Miller and Modigliani) appear to be more growth orientated and prefer shares with a lower dividend and more growth

²¹ Unless the individual has been identified by the I.R.D as a regular trader.

²² Unlike Australia which introduced a Capital Gains tax in September 1985.

²³ This is significant as older people form a large proportion of Individual investors.

potential. However, as Miller and Modigliani (1961) commented, one clientele is as good as any other and the existence of a clientele does not imply that one dividend policy is better than any other.

Assumed Rationality

Miller and Modigliani (1961, Pg 412) defined a rational investor as one who preferred more wealth to less and is indifferent to the form this income takes. In turn, each investor assumes that all other investors act this way, or as Miller and Modigliani (1961, Pg 427) term "*imputes rationality to the market*". This definition of rationality is underlined by the Von Neumann-Morgenstein Expected Utility Theorem. However, since the development of this theory others have begun to investigate the definition of rationality itself and its application to the financial markets.

One of the most significant advances beyond the von Neumann-Morgenstein view of rationality was made by Tversky and Kahneman. These two researchers have made a significant contribution to investigating rationality. According to Arrow (1982, Pg 5), their most significant addition was the development of the 'over-reaction hypothesis'. This hypothesis predicts that individuals give new information more importance or significance¹ than older information. As Arrow states, there is a tendency to ignore both prior information² and the quality of the present information. According to Arrow, a "*plausible hypothesis*" is that individuals may not recognise that surprises could occur in the future and that there is a tendency to underestimate uncertainties in the short term.

DeBondt and Thaler (1985, 1987, 1990) investigated this phenomenon. They based their research on the idea that investors' are "*poor Bayesian decision makers*" and overreact to unexpected and dramatic news events. Their results were consistent with the predictions of the over-reaction hypothesis as investors did over-react to current information.

¹ More significance than the information deserves.

²As Arrow explains, Bayesians' would call these probabilities.

Their 1990 article extended the analysis of this phenomenon to financial analysts. According to these two authors, 'formal economic models' of financial markets assume that all agents in the market are rational. Economists recognise that some are irrational, but consider them irrelevant as there are enough rational traders to ensure a rational market. Despite this, DeBondt and Thaler concluded that analysts were "*decidedly human*". When they compared their patterns of behaviour in an experiment with undergraduates, they found that analysts 'over-reacted' in the same way that the students did.

They concluded that researchers and practitioners should take the "*behavioural explanations of anomalous financial market outcomes*" seriously. As an illustration, they quoted practitioners' statements which commented that the cause of the October 1987 share crash was investor over-reaction. DeBondt and Thaler argue that analysts should be included with those who 'over-reacted' as they are just as likely to overreact as an individual.

Another study with similar results was conducted by Ghosh and Woolridge (1989). They analysed the effect of a dividend cut on a company's share price. Their results were consistent with the hypothesis that shareholders overreact to information (dividend cuts in this case), regardless of the reasons for the dividend cut.

Another of Kahneman and Tversky's ideas was further developed by Shefrin and Statman (1984). These researchers investigated alternative explanations of investor rationality³ based upon prospect theory and self control theory. The key point from these two theories is that the "*perfect substitutes feature of capital gains and dividends*" characterising finance research is not always appropriate.

Kahneman and Tversky developed Prospect Theory in the late 1970's. One of the tenets of this theory is the idea of regret aversion. Evidence from their studies indicated that

³ Viewed as irrational by finance theory.

the sale of stock caused regret for some people.⁴ Therefore individuals who are averse to regret may prefer to fund consumption from dividends rather than capital gains. This means that dividends and capital are not perfect substitutes, even when accounting for tax effects and informational considerations.

Shefrin and Statman (1984) based their self control on a form of clientele effect argument. This theory can explain why people in the saving stage⁵ of the life cycle hold portfolios with lower dividend yields than those held by people in the dissaving stage.⁶ The argument states that investors will use dividends for their consumption as a form of self control. Investors achieve this by selecting a company whose dividend payout ratio conforms to their desired consumption level. Self control enters as the investor's fund consumption from dividends and they will not have to use capital to fund their consumption.

Ghosh and Woolridge (1988) conducted an empirical analysis of self control theory while investigating shareholder reactions to decreases in dividend payouts by firms. They argued that self control theory portrays the younger (saving) investor as "*a myopic individual*" who has a long term objective of sustained growth. At the same time, the older (dissaving) investor is a "*self indulging myopic doer*" concerned with short term gains which can be to the detriment of long term goals. Their empirical analysis found no support for self control theory.

Miller (1987, Pg 15) accepts that investor irrationality exists. He comments that it may be more apparent with private investors who, "*unlike institutional and other large*

⁴ As the share price may rise after the sale, hence causing regret when the investor could have sold it later and made a higher profit.

⁵ Assumed to be younger investors who are starting their careers and saving for retirement.

⁶ Individuals who have retired and are dissaving, that is, financing their consumption partly out of their savings.

investors, do not rely heavily on professional portfolio advisers".⁷ For these investors, stocks may be more than just the "abstract 'bundles of return' of our economic models".

Most research on investor rationality shows that the assumed rationality of investors as defined by the von Neumann-Morgenstein axioms may be inappropriate. Since Lintner (1956), most empirical research uses the assumption that investors are rational maximisers. However recent studies show that investors do not act rationally all the time and may have good reasons not to. As Shefrin and Statman (Pg 278) comment; financial theory has tended to ignore the question of how individual investors behave but instead has concentrated on price determination. Nevertheless, research shows that investors do act irrationally, as they overreact to current information and may not be indifferent between capital gains and dividends as finance theory assumes that they should be.

⁷ As Miller points out, most of these investors hold and manage a modest stock directly.

Investment Methods

During the late 1970's and early 1980's several researchers analysed the investing strategies and preferred information sources of individual investors. Specific areas investigated have been; the accounting information used in decision making, the investing strategies used by individual investors, portfolio design and the relative success of individuals compared to the market.

Researchers investigating the preferred information sources of private investors have noticed a consistent theme. Investors (not surprisingly) prefer future orientated information. Baker and Haslem (1973) comment that a widely accepted axiom of investing is that investors base their decisions on expectations of future earnings. Therefore, providing them with reliable earnings forecasts will improve their investing decisions as it reduces their uncertainty.

A number of studies investigating the usage of annual reports by shareholders have documented the preference for future orientated information. According to Hines (1981) examples of preferred information are:

- 1 The expected future growth in earning per share,
- 2 The company's economic outlook,
- 3 Industry and economy information.

Chenall and Juchau (1977) found similar results as investors prefer information about events and transactions expected to occur while historic factors have a low ranking.

Several researchers have analysed the specific sources of information used (such as newspapers or annual reports) by individual investors. Most comment on how the information requirements of this group differs from other investing groups. Baker and Haslem (1973, Pg 68) noticed that individuals and analysts prefer different sources and types of information. According to Hines (1981), this is because professional investors are usually more aware of investment decision making progresses and this is reflected

in their information sources. Courtis (1982, Pg 55) also found empirical support for this assertion as his results indicated that the individual's level of education influenced the information⁸ used in decision making.

Of the possible sources of financial information, material gained through the financial press is perhaps the most important for individual shareholders. Lease, Lewellen and Schlarbaum (1974) reported that investors' considered public messages in journals and newspapers to be the most important. This group had lower opinions of customised services such as councillors, research organisations and banks. Finally, private messages from management were considered important, but these were still secondary to public information.

According to Hines (1981, Pg 48) there may be two reasons why individuals do not rely extensively on annual reports to gain their investing information. Firstly, less than 55 per cent of a company's earnings is attributable to firm specific factors. Therefore investors' use the financial press as a source of information regarding 'external factors' which may effect the firm's profitability. Secondly, shareholders may anticipate the content of annual reports⁹ before the release of the annual report. Therefore, share prices have already impounded the information in annual reports before publication, so shareholders receive them too late to use in their decision making.¹⁰

Courtis (1982) confirms the low usage of annual reports finding that only a sixth of private shareholders conducts a detailed analysis of the annual report.¹¹ However,

⁸In this case, the sections of the annual report.

⁹By other information sources which can be obtained earlier, such as newspaper reports, stockbrokers reports, trade journals and investment circulars.

¹⁰ This is true in New Zealand, as a summary of a company's annual report is sent to stockbrokers months before the annual report is sent to all shareholders.

¹¹ Detailed was defined as reading the report for more than thirty minutes.

twenty per cent of private shareholders virtually ignored the report and spent approximately five minutes reviewing it.¹²

The investing strategies used by individual investors has received some attention from academics. The most influential technique used in analysing investments appears to be fundamental analysis. Lease, Lewellen and Schlarbaum (1974, Pg 424) found that nearly two-thirds of investors' relied on fundamental analysis while only a quarter of investors relied on professional advice and very few used technical analysis. In their survey of investment analysts, Arnold and Moizer (1984) confirmed that the primary assessment method used is fundamental analysis and that technical analysis was "*a poor second*".

Other idiosyncrasies about the investing strategies of individual investors have received attention from researchers. Some more noticeable examples are:

- Lease, Lewellen and Schlarbaum (1974) found investors spent little time and money monitoring their investment activities compared to other classes of investors.
- Shefrin and Statman (1985) noted, that when compared to other classes of investors, individuals are very resistant to sell shares at a loss. They have a higher propensity to wait for a hoped increase in share price to recover their losses.
- Lakonishok and Maberly (1990, Pg 232 - 242) suggested that individual investors may be more active traders on a Monday. This is because individual investors will devote time to financial decisions during the weekend and hence will be relatively more active on a Monday.

Although it is apparent that private shareholders own a smaller proportion of shares than institutions,¹³ there is no readily available explanation for this. A common

¹² In his own opinion - glancing at the photographs.

¹³ Discussed in more detail on the section investigating the significance of private shareholders.

proposition is that professional investors earn greater returns than individual investors. Therefore individual investors let professional investors manage their money.

Schlarbaum, Lewellen and Lease (1978) investigated whether private investors were any less successful than professional investors. The findings of this study indicated that individual investors surveyed obtained returns "*commensurate to the amount of systematic risk they assumed*". Professional portfolio managers were no more successful in selecting securities than individual investors. This was also true in comparison to large traders with sizeable blocks of shares. Therefore, there is no apparent disadvantage for individual investors to manage their own portfolios.

In a later study, Lewellen, Lease and Schlarbaum (1979) attempted to analyse the variables related to investment performance. The results they obtained were, in their own opinion, poor. The first attribute they looked at was the portfolio construction chosen by the investor. The results obtained were not unidirectional as the best and worst performers shared common attributes. The higher and lower performers tended to have centred their trading activities in a smaller number of securities, invested off the main stock exchanges (such as the ASE) and concentrated on securities with higher beta's. Whereas, those who chose shares with a high dividend yield achieved a respectable return and comprised the middle performers.

An attempt to regress performance on demographics also obtained poor results, which was not considered surprising. The only visible link between performance and demographics was somewhat "*counter-intuitive*" as investor education and income were both negatively related to the performance of the investor. The lower income earners and those with less formal education fell within the top performance groupings in the analysis.¹⁴

¹⁴Both variables were univariate significant at the .05 level.

Another area analysed by this study was the varying successfulness of the possible investment strategies used by investors. Again the results were somewhat disappointing. The investment strategies (such as fundamental or technical analysis) used by investors had no significant advantages over each other. Also, investors who spent little time and money on analysing information to make security selection decisions, "*seemed to realise profits at no higher rate than did their more parsimonious and studious colleagues*". A somewhat perplexing conclusion is that nothing can help individual investors' gain an advantage over other investors¹⁵

Lease, Lewellen and Schlarbaum (1974) analysed the portfolio design of individual shareholders. Most investors held well-diversified portfolios and had eliminated ninety per cent of the non systematic risk from their portfolios. Approximately 40% of their assets were invested in equities and the portfolios mainly emphasised long term capital gains. Dividends and intermediate gains were the next most popular type of share, and short term gains were the lowest priority.

According to Lease, Lewellen and Schlarbaum (1974) the average investor is "*an individual who is far from preoccupied with managing his portfolio*", obtains most information from public sources, mostly uses fundamental analysis for investing and owns a diversified portfolio. However, this group could not find support for the argument that institutions produce investment results superior to individuals. Therefore, "*explanations of the withdrawal of individual investors from the stock market*", based on these findings, cannot be explained by institutions being able to produce superior results.

As a final comment, Schlarbaum, Lewellen and Lease (1978, Pg 438-439) propose that a major reason for individuals to manage their own portfolio may be "*the pleasure*

¹⁵Unless (according to this study) they stopped their education and were in a lower income grouping.

derived from the activity itself". The investors who responded to their survey stated that they enjoyed the responsibility of managing their own portfolio.

Using Private Investors to analyse the Theory

Arnold and Moizer (1984) state that most dividend research uses market based studies which analyse the "*aggregate market reaction*" to an event in the market. A major drawback with these studies is that they "*shed little light*" on the decision making processes of those involved. However, if a researcher surveyed those involved, they may be able to get a better indication of the decision making process of those involved.

To date, surveys have been used extensively to conduct research in finance. Particular groups which have been targeted by researchers have been company managers, financial analysts and private shareholders. The surveys of private investors have investigated many areas in finance, such as investor rationality, their perceptions of risk and return, and market efficiency and their preferences for dividends.

Of the survey literature which has investigated dividend policy and its relation to company valuation, very few researchers used private shareholders in their research. One major study is available which used private investors to analyse dividend policy. Baker and Haslem (1974) found that when reviewing investor perceptions of shares, dividends explained the greatest variability in their views. The results indicated that investors' differ widely in their opinions concerning the importance of dividends and that dividends may provide a signal of management's judgements of future expectations as investors' realise that reported earnings do not necessarily correlate to "true" earnings.

Individual investors have also been used to investigate how the assumptions of finance theories, such as the Capital Asset Pricing Model,¹⁶ hold up to testing. According to Chang and Most (1977), their study challenges one of the assumptions of these theories, namely homogeneous investors. They discovered contradictory expectations from an

¹⁶In particular, that investors have homogeneous expectations regarding the returns on assets.

'apparently similar' survey between two different groups of investors.¹⁷ Their analysis found age, education, and occupation to be important characteristics linked to differences in expectations and indicated that this particular class of investors had heterogeneous expectations.

In a later study Chang, Most and Brain (1983) analysed users of financial statements to ascertain if they are a homogeneous group. The users of corporate annual reports were classified into 3 groups: individual investors, institutional investors, and financial analysts. The investigation revealed that individual investors were not homogeneous¹⁸ and suggested further research to stratify this group. While institutional investors and financial analysts were found to be homogeneous, they concluded that the individual investor group was very diverse.

Gooding (1975) found similar results as individual investors have more heterogeneous perceptions than portfolio managers. This implied that share price changes could be more significant in a market dominated by professionals as their actions would be more homogeneous, unlike individual investors. It also suggests that private investors should be analysed separately from other types of investors.

Several researchers have analysed individual investors' perception of the risk and return relationship with regards to the design of a portfolio. Most research supports the notion that investors compare risk and return when analysing an investment. Gooding (1975, Pg 1314) found investors' perceptions (regarding a stock) to be "*highly related to risk and return measures*". Markese and Perritt (1985, Pg 29) concluded that investors' understand systematic market risk and can make investment decisions based upon relative market risk. Of those investors that knew the Beta of their portfolio, the majority reported Beta values equal or greater than one.

¹⁷One based in Florida and the other based in New Zealand.

¹⁸In regards to the others.

This survey suggests that individual investors are risk seekers as Markese and Perritt (Pg 31) found that individual investors' have a "*relatively strong*" preference for risk. The respondents preferred growth rather than income opportunities. The relationship of risk preferences to investment objectives is "*rational and support(s) the investor behaviour assumptions underlying financial models*".

However other researchers, such as Cohn, Lewellen, Lease and Schlarbaum (1975), disagree. They state that investors' risk aversion has been an essential assumption underlying all capital market theories, reporting that this is consistent with the empirical data.

Market efficiency is another area analysed using this methodology. No comprehensive analysis has been undertaken, the results indicate that shareholders view the market as being efficient, to an extent. Lease, Lewellen and Schlarbaum (1974, Pg 432) found results consistent with the random walk hypothesis, as the respondents perceived that short term stock prices are difficult to predict with any confidence.

However, other studies find differing levels of market efficiency. Arnold and Moizer (1984, Pg 206) commented that the market "*reacts quickly and in the right direction to new information and is hence efficient in that sense*", but the price changes do not follow share valuation models recommended in the literature. Many analysts (the subject of their survey) were not using these models and investors employing the analysts may be missing opportunities to make gains or to avoid losses when new information becomes available.

This particular methodology has provided evidence on a range of theoretical aspects for finance. It provides evidence that: firstly, investors are not homogeneous as has been assumed and secondly, appear to have a reasonable understanding of systematic risk and its relation to return. However, some analyses obtain mixed results, which is perhaps due to the differing expectations among investors. What is clearly obvious, is that little research has used private investors to analyse optimal dividend policy.

Role of Shareholder, Market Significance and Power

The goal of this section is to collate the available evidence regarding the role that individual shareholders play in the share market; in terms of their trading activities and proportion of share ownership. Unfortunately, the research in this area is incomplete, as Bowman, Cliffe and Navissi (1992, pg 5) state; that while research has partitioned investors into classes, *"there is very little work either theoretical or empirical that helps with identification of the price setting investors"*.

What research is available, has investigated either the English or American market. However, according to Briston and Dobbins (1978, Pg 3) this information is not accurate due to the *"abysmal quality of published statistics"* available. To analyse the equity ownership structure in New Zealand, the trends and patterns occurring in these overseas markets are the only available source of evidence.¹⁹

What is most evident from this research is the high level of institutional ownership of the securities market and most researchers note that this trend is increasing. Briston and Dobbins (1978, Pg 11) comment that the change in *"ownership of securities from persons to institutions has been a feature of the U.K. securities markets for many years"*. Similar trends have occurred in the U.S.A. as noted by Brancato (1990, Pg 38) who observes that institutional investors have substantially increased their trading activity and their percentage ownership of American corporations in the last fifteen years

While individual investors are becoming less active traders in the market, they are not leaving the market. As Lease, Lewellen and Schlarbaum (1974, Pg 413) state, there has been a withdrawal of the *"individual capital supplier to a position of derivative rather than direct participation in the market"*. Blume and Friend (1978, Pg 5) reiterated this finding, commenting that *"virtually all of this decrease in the proportion of individual*

¹⁹Although some New Zealand companies produce statistics regarding the types of owners and size of holdings, this is rare (especially regarding the types of owners, the size of holdings is statutory) and not indicative of the market.

holdings occurred in direct holdings". Investors have channelled more funds into personal trusts and investment companies and this has taken on a greater importance than their private holdings.

This trend has been summarised by Lease, Lewellen and Schlarbaum (1978, Pg 414) who state that institutions have displaced individual's as they administer the portfolio on the shareholder's behalf. Although, this may reflect that the individual may lack the skills to manage a portfolio, the available evidence does not support this. According to Schlarbaum, Lewellen and Lease (1978, Pg 440) "*nowhere in the evidence compiled, can much support be found for the argument that institutions are able to produce investment results superior*" to individuals. Blume and Friend (1978, Pg 73) find evidence consistent with this as their data indicates that this is little difference in individual and institutional investment performance. Therefore, the trend of individual investors becoming indirect investors is not attributable to the relative performance of individuals compared to institutions.

Of the research that has attempted to analyse the patterns in security ownership, the majority has targeted institutional investors while individual investors have received scant attention. Two English studies have analysed the ownership of equities (see table 1.1). Briston and Dobbins (1978, Pg 116) found that "*other investors*" (which includes individuals) owned about 57% of U.K. quoted equities in 1975. They predicted that this group's holding will continue to fall to about 50 % in 1980 and in between 31% and 16% in the year 2000. This trend appears to be occurring in England, as a later study by Dunham (1989, Pg 74) found that ownership by individuals has fallen from 58.7% in 1963 to 18% in 1988

Table 1.1: Relative proportion of ownership of equities in England

Class of Investor	Briston and Dobbins (1975)	Dunham (1963)	Dunham (1988)
Other (Includes private)	57		
Private		59	18
Institutional	43	28	67

Courtis (1982) analysed the usage of annual reports by private shareholders. This Australian study found that private shareholders represent 82 per cent of the recipients of annual reports. Therefore, the author concluded that this group is important enough to warrant analysis.

Research focusing on institutional ownership of equities is more detailed. The focus has again been on the English and American equity market, but the results between these two are not similar. The research indicates that the proportion of direct institutional investment is lower in America than it is in England. Briston and Dobbins (1978, Pg 3) predict that institutional shareholders will own 84% of all quoted equities in the U.K. in the year 2000. A later study by Dunham (1989, Pg 74) provides evidence to support this as he finds that the proportion of U.K. equities owned by institutions has grown from 27.8% in 1963 to approximately 67% in 1988.

The American research shows that institutions only own about 45% of the listed equity. A report in Director and Boards (1990, Pg 58) showed that institutions owned \$1.3 trillion in corporate equities (41 per cent) in the U.S. at the end of 1988. Two other researchers have found results similar to this. Potter (1992, Pg 149) found that institutional investors owned 45.5% of the equity in 1985. Brancato (1990, Pg 38) estimates that institutional shareholders in 1988 "*represented approximately 45 per cent of all equities*". Although there is a difference between the figures report in Directors and Boards, and Brancato, it is apparent that during the late 1980's, institutions owned 45% of the stock in the U.S.A.

Table 1.2: Relative proportion of ownership of equities in America

Class of Investor	Directors and Boards (1988)	Potter (1985)	Brancato (1988)
Other (Includes Private)	59	54.5	55
Institutional	41	45.5	45

Although institutions do not dominate the market in terms of ownership, it appears that they are much more active traders than private investors. Lease, Lewellen and Schlarbaum (1974 Pg 413 - 414) state that since 1950 there has been "*a clear reversal of the relative roles of the individual and the institution in allocating ownership funds among competing enterprises*". Institutions have become much more active traders as their volume of trading exceeds their relative proportion of equity ownership. According to Briston and Dobbins (1978, Pg 51) this occurs in the U.K. as the "*overall effect is that combined institutions contributed more to total turnover than their proportional ownership of U.K. quoted equities*", and other shareholders had contributed less.

This trend still continues today as Mahoney (1991, Pg 54) comments that while institutions in America account for about two thirds of daily trading, individual investors still hold some 55% of the common stock of U.S. companies. Lakonishok, Shleifer and Vishny (1992, Pg 24) find similar results as they report that in 1989, institutional investors held about 50% of the equities in the United States, but their trading constituted 70% of the trading volume.

The type of companies which individual and institutional investors prefer invest in is another area which has been investigated. It is apparent that there are significant differences in the type of company that individuals and institutional investors prefer to invest in. According to Blume and Friend (1978, Pg 5) "*institutions and individuals tend to concentrate their holdings in different types of stocks*". American institutions mostly invested in the largest 500 NYSE stocks, and largely ignore the over the counter

(OTC) stocks. However, individuals are almost a "*mirror image*" as they are the main investors in OTC and smaller listed stocks.

This occurs to be the case for a variety of reasons. According to Mahoney (1991, Pg 54) individuals make up the market for small companies, not by preference, but because the amount of shares available is not enough to attract large institutions. Secondly, small companies' shares are usually not so high priced and individual investors find these more attractive. Baker and Gallagher (1980, Pg 74) provide evidence which is consistent with this as they comment that if a firm reduces its share price (through a mechanism similar to a share split), this makes it more appealing to small investors.²⁰ They link this to the notion that high priced stocks are not as popular with individual investors and have a limited market available to them²¹

Brancato (1990, Pg 38) analysed the concentration of ownership (mainly by institutions) in certain industries. This researcher found that some industries have a higher concentration of ownership by institutions than others.²² In 1988, aerospace, paper, and transportation industries had the highest level of institutional ownership (58 per cent), while utilities and telecommunications had the lowest (35 per cent). Therefore, individual investors and institutional investors prefer to invest in different size firms and certain industries.

Another area for analysis has been the impact that institutions have on market activity and trading. Researchers have been trying to determine whether institutions are price setters, if they follow the market, and if their trading has an impact on the market. The vast majority of this research is American and the results are inconsistent. An earlier study analysing this was conducted by Briston and Dobbins (1978, Pg 6). These two

²⁰A recent example of this in New Zealand is when Tasman Agriculture decided to conduct a share split. The directors stated that a "*share split will facilitate a wider shareholder distribution*". Pg 2, Tasman Agriculture Ltd., Announcement to the New Zealand Stock Exchange, Oct 12 1993.

²¹ Namely institutional investors.

²²Therefore, it would be assumed that private shareholders would target other types of industries.

concluded that institutions either follow or make the market and that they do not *"push share prices away from index extremes"*.

Further research has occurred, but the results between the various pieces of research are inconsistent with each other. Lakonishok, Shleifer and Vishny, (1992) found results similar to that of Briston and Dobbins. They suggest that institutional investors have a wide range of trading styles, such that they offset each other to a large extent. They concluded that there is *"no solid evidence in our data that institutional investors destabilise prices of individual stocks"*. Instead, institutions follow such a broad range of styles and strategies, that their trading offsets *"each other without having a large impact on prices"*.

Two other researchers who analysed this area achieved totally contradictory results. According to Dunham (1989, Pg 75) since private shareholders have become less important in trading, it is harder to find investors to take a contrary view to the institutions. This author believes this accentuates the *"gyrations"* in the market, so that *"everyone is either bullish or bearish"*. Potter (1992, Pg 154) argues that a concentration of institutional investors will result in fewer (and larger) trades so that the large trades will affect security prices. Therefore imperfect competition *"may be more prevalent in securities owned by institutions"*.

The trend of high levels of domination by institutions looks set to remain, as Dunham (1989, Pg 74) reports that many private investors suffered financial losses from the October 1987 crash, and have not returned to the market in force. This author predicts that in *"the foreseeable future, institutional ownership is likely to remain high"*. However, more recently there have been reports that private investors are trading more actively. Shell (1992, Pg 7) reports that small investor activity on the New York Stock

Exchange was up 18% on the first nine months of 1991. More recently in New Zealand, there are signs that individual traders are returning to the market.²³

It appears that private investors play a limited role in share market trading. Lease, Lewellen and Schlarbaum (1974, Pg 432) found that private investors were not naive about their role and trading position in the market. However, Blume and Friend (1978, Pg 5) point out that private shareholders are much more important in stock-ownership than in trading. While institutions are the most frequent traders (in relation to the proportion of stocks that they own) private shareholders do constitute a large proportion of the owners of securities. This finding appears to be applicable to New Zealand, and therefore individual shareholders are not an insignificant group.

²³As reported on National Radio (from the National Business Review).

Part II:
Hypothesis to Be Tested

Hypothesis 1: Individual Investors believe that dividends affect the value of the share.

This hypothesis tests whether private shareholders believe that dividends affect the value of a share. If this is proven correct, it will:

- help disprove Miller and Modigliani's theorem that share values are independent of a firm's dividend policy,
- Provide evidence in favour of Lintner's traditional argument,
- Provide limited evidence of the tax clientele argument.

This section has two parts. The first directly analyses the question; 'do dividends affect the value of a share'. The second analyses the influence that dividends have on the value of a share.

Section 1

Question i) seeks to ascertain whether shareholders believe that dividends affect the value of a share.¹

There is significant empirical support for the proposition that dividends do affect the value of a share. This follows the theory of the traditional rightists who favour this supposition.² This question format has been used on groups such as company managers and security analysts, but not individual shareholders. Farrelly and Baker (1989, Pg 99) found that institutional investors believe that stock price changes could be attributed to changes in dividend policy. In an earlier study of managers, Baker and Farrelly (1988, Pg 84) found that one of the most important reasons for paying dividends was to maintain or increase the company's stock price.

¹ A copy of the questionnaire is contained in the appendices.

²For a more complete synopsis of the empirical evidence which supports this proposition, refer to the section on Optimal Dividend Policy.

Other studies analysing aggregate market data have reached a similar conclusion. Jose and Stevens (1989, Pg 658) found that both the trend and stability of a company's dividends had a significant long run impact on the value of the firm. Shiller (1990, Pg 58) concluded that real stock prices follow the trend of real dividends.

This question should receive strong agreement, as the vast majority of research available today can locate some correlation between dividends and the share price of a company.

Section 2:

The second section seeks to investigate how much influence dividends have over the value of a share. The survey participants receive a list of paired comparisons to see which one³ has more influence⁴ over the price they would pay for a share.

The empirical evidence available on this topic is incomplete and very inconsistent at best. Therefore this section is very exploratory in nature. Another problem is that the question design may not elicit the desired responses as there is little previous work available for guidance.

The five factors being investigated are:

- a) The P/E Ratio,
- b) The Earnings Per Share (a proxy for earnings),
- c) Company Risk,
- d) Imputation Credits,
- e) Dividends,

³When they are evaluating shares.

⁴Or has a similar influence over the value of a share.

These factors were chosen as they are firm specific factors which the literature has shown have some correlation to the value of a share.

Literature Summary: Importance of factors in share valuation.

Price / Earnings Ratio (P/E)

Although this ratio incorporates the share price of a company in its calculation, practitioners use it to analyse how overvalued or undervalued a company is (based on its earnings) compared to others. Therefore it is a very important factor used for analysing shares.

There is considerable empirical support for the use of the P/E ratio in evaluating stocks. Pari, Carvell and Sullivan (1989, Pg 60) comment that as security valuation techniques become more sophisticated (and despite the availability of new methodologies) the *"price/earnings (P/E) approach to security valuation has maintained its popularity among practicing security analysts"*. Another study, conducted by Hickman and Petry (1990, Pg 81) compared dividend based valuation models to the P/E technique. When used for valuing companies, the discounted dividend approach produces errors approximately 3 to 4 times as large as the P/E methods.

Another researcher who analysed the use of the P/E ratio was Peters (1991). This author commented that the P/E analysis is a *"widely used tool"* in determining the relative valuation of stocks. However, this methodology has several disadvantages, as it is only useful when analysing homogeneous stocks (such as in a particular industry). This author also notes that this ratio is more applicable for 'mature companies', as this technique has its limitations when used for growth stocks.

The P/E ratio is important when evaluating shares, as its primary usage is comparing similar firms based on their earnings and share price importance. Therefore it should receive a high rating from the respondents.

Earnings Per Share

According to Miller and Modigliani, the market valuation for shares is derived from the perceived stream of future earnings. Therefore, the current earning's figure and trends of previous earnings should give an indication of the company's future earnings.

There is significant evidence available indicating that a primary factor behind the value of a share is the company's earnings. A study by Campbell (1990, Pg 47) attributed 77% of the variance in unexpected stock returns to news about future earnings (dividends explain 13% of the variance). Another group, Constand, Freitas and Sullivan (1991, Pg 78) analysed the valuation of Japanese shares and found that the 'dramatic increase' in the market values of shares was attributable to an increase in company earnings. A third researcher, Peavy III (1992, Pg 10) shows that changes in company earnings and interest rate factors explains "*approximately 58% of the variance of annual stock market returns from 1953 to 1987*".

Therefore, company earnings is another important factor used in the valuation of shares. Therefore, like the P/E ratio, earnings should receive a high ranking from the respondents.

Company Risk

The risk involved with investing in a company⁵ has been an important factor involved with valuing companies. The classic example of this is the risk premium involved in the Capital Asset Pricing Model, where calculating the company's risk premium entails multiplying the individual company's beta by the market risk premium.

There is significant empirical support available indicating that risk influences the value of a share. A study by Shukla and Trzcinka (1991, Pg 15) found that measures of risk explained up to 40% of the variation in returns across stocks. Another study by Good

⁵That is, its beta (or other indicator of risk, such as the chance it will cease trading).

(1989, Pg 7) found that swings in investor confidence (related to the risk premium) has, at times, overwhelmed the significance of earnings and dividends when valuing shares. In their analysis of the Japanese sharemarket Constand, Freitas and Sullivan (1991, Pg 78) found that risk had a significant relationship to the market value of Japanese firms.

This factor should be important in the valuation of shares. At best, it appears that it can only be equal in importance to variables such as earnings and the level of dividends (as it is used in conjunction with these variables), or behind them when evaluating a company.

Imputation Credits

Although imputation credits are relatively new to New Zealand, Bowman, Cliffe and Navissi (1992, Pg 2) suggest that their introduction "*may have significantly modified many previously accepted prescriptions for financial asset allocation and corporate financial management practices*". The disparity in treatment (of dividend income for taxation purposes) caused by the introduction of dividend imputation⁶ has significant implications for dividend policy and company valuation. Therefore, imputation credit availability (by companies) and their usage should be very important factors in company valuation.

However, overseas research, particularly that done in Australia, shows that investors have not taken full advantage of the imputation system. Hamson and Ziegler (1990, Pg 51) state that certain classes of investors have not made full use of imputed tax credits and this has resulted in Australia's dividend imputation system being very much taxpayer specific. More recently, investors' and companies have attempted to overcome this problem.

⁶Such as between tax free groups and foreign investors.

Other researchers agree that the preference for imputation credits has become very taxpayer specific. Wills (1991, Pg 36) reports that dividend imputation has created different groups or classes of shareholders with different preferences for particular dividend and franking combinations.

The results for this factor should be mixed as the response will mainly depend of the specific individual answering. If the individual prefers capital gains income, then the availability of imputation credits will not be a high priority factor compared to those who rely on dividends for their income. The difference between these individuals should nullify the influence that imputation credits have and leave it as the lowest ranking factor.

Dividends

The use of dividends in valuing shares is a long established methodology in finance. The Gordon Growth Model codifies this as it uses discounted cashflows provided by dividends to calculate the value of a share. There is also significant evidence available showing that dividend policy has some relationship to the value of companies. Jose and Stevens (1989, Pg 659) found that stable dividend yields have a strong association with higher share valuations. According to Baker and Haslem (1974, Pg 1259), the factor explaining the greatest variability in share valuation was dividends. Dividends may even be a better predictor of the real earnings⁷ than a company's own reported earnings.

In another study Shiller (1990, Pg 58) found that real stock prices just followed real dividend changes. According to this author, *"it would seem that we know that dividends are the ultimate source of most stock price movements"*. Although the correlation between share price and dividend was *"a low-frequency one"* as dividends exhibit long run trends which share prices follow. Although, the author noted that in the shorter term, the correlation between price and dividend is much lower.

⁷Via the signalling hypothesis.

Two studies have directly compared the relative ability of dividends and earnings to predict share prices. One study by Hickman and Petry (1990, Pg 81) found that when using a P/E based model and a discounted dividend formula to calculate the value of a share, the dividend discount model produced errors 3 to 4 times as large as the P/E model. Another study analysed the proportion of variance in stock returns that an earning's proxy and a dividend proxy could explain. Campbell (1990, Pg 47) attributed 77% of the variance in stock returns to information about future earnings while dividends only explained 13% of the variance.

Dividends will not be as important as other factors when evaluating shares, especially in regards of the factors being analysed in this investigation. Research shows that dividends do not have a very strong influence over the price of a share.

Conclusion

The ranking's expected from these five factors are:

- The Price Earnings (P/E) ratio will probably be the most consistently important factor. Given that earnings are an important valuation indicator, the P/E ratio will allow investors to determine whether the share is overvalued or undervalued.
- Earnings should rank second. This should fall subordinate to the P/E ratio⁸ but will rank ahead of both imputation credits and dividends, and to be slightly ahead (or equal) to risk.
- Risk will be the third most important factor, as it has been shown to be more influential than dividends or imputation credits.
- Dividends will rank ahead of imputation credits, for two reasons. The first is that a firm must have a dividend policy which appeals to the shareholder in the first

⁸As it contains more information than the earnings alone.

place.⁹ The second reason is that imputation credits appear to be very shareholder specific and this may dilute the ranking of imputation credits.

- Finally Imputation credits, for the reasons outlined above would be the lowest ranked factor.

This second section will not help answer the hypothesis being tested, for if the results occur as hypothesised, it will show that dividends are relatively unimportant when valuing shares (in relation to these other variables).

⁹As it must be paying a dividend to have imputations attached.

Hypothesis 2: Private investors prefer dividend income to possible income from capital gains.

This hypothesis tests whether private investors prefer income from dividends, rather than income made from selling shares. To investigate this, the survey employed question ii) and iii).

Question ii) attempts to ascertain whether individuals prefer income from dividends to capital gains.

This question investigates optimal dividend policy directly.¹⁰ The three main arguments, in brief are: the rightists claim that investor's prefer to receive income in the form of dividends, as it is a less risky form of income (determined by question iii) and a more certain form of cash flow. The middle group argues that investor will be indifferent between dividends and capital gains as they are perfect substitutes.¹¹ The final school argues that companies should set their disbursement policy according to the tax regime operating at the time. If the tax rate for dividends is higher than the tax rate for capital gains then investors should prefer to receive their income in the form of capital gains rather than dividends, and vice versa.

Survey respondents should disagree with question ii) and prefer dividend income for a variety of reasons:

a) Since individual investors' are being investigated and not institutions¹² the respondents (private investors) may not view dividends and capital gains as substitutes. Evidence for this argument comes from Shefrin and Statman (1984). The main point of their article is that:

¹⁰The literature review contains a more comprehensive review of the conflicting views of the three main schools.

¹¹For to be substitutes they must be seen as having the same risk.

¹²Although this argument can be extended to institutions.

The perfect substitutes feature of capital gains and dividends (in the absence of taxes and transaction costs) which characterises the standard approach is not always appropriate.

They provide evidence as to why an individual may prefer income in the form of dividends rather than capital gains. The chapter investigating investor rationality has a more detailed summary of this.

b) A second argument as to why investors should prefer dividend income is a transaction cost based argument. According to Shefrin and Statman (1984, Pg 271), the existence of transaction costs makes *"it more efficient for people who consume from their portfolios to consume from dividends rather than sell shares and pay brokerage commissions"*. Scholz (1992, Pg 264) supports this as he states that transaction costs changes the Miller and Modigliani irrelevance position. Therefore, to convert shares into cash, an investor has to pay brokerage fees and this author comments that for smaller sales *"these fees can be a significant percentage of the total sale as they often contain a fixed component"*.¹³ Given that most shareholders have relatively small holdings, the effect of transaction costs may have some influence over their income preference.

c) The final argument relates to taxation. In rational terms, an individual trader should prefer to receive income in the form of capital gains as there normally will be no taxation paid on this income.¹⁴ However, since the introduction of the imputation credits, individual investors should have a strong preference for shares carrying full imputation credits. Given that a large number of companies in New Zealand pay fully imputed dividends, this will increase the shareholders gross return and give them a rational reason to be indifferent between income from dividends and capital gains.¹⁵

¹³In Christchurch, these fees consist of an approximate \$30 - \$50 fixed charge and a minimum base rate of 1.5%.

¹⁴Unless the individual has been identified as a regular trader by the I.R.D.

¹⁵For shareholders in lower tax brackets, imputation credits can significantly decrease the tax payable for a taxpayer, as imputation credits are calculated at the maximum tax bracket. However, this reasoning does not apply to those individuals receiving the pension.

Therefore since shareholders are not truly rational profit maximisers, they should disagree with this statement. If Miller and Modigliani's argument is correct, they should be indifferent between the two income forms, and if the tax based theory is correct, they will agree with the statement.¹⁶

Question iii) attempts to determine whether individual investors believe that dividends are a safer form of income than capital gains.

Lintner (1956) proposed that dividends represent a safer form of income than capital gains. This is because investors do not have to wait to receive the income¹⁷ (an idea recently supported by Scholz 1992) and that the investor has the assurance of an income, as the capital gains may never occur.

Investors should support this argument and will agree (on average) with the statement in question iii)

Although the NZSE indicators were increasing at the time of the survey's first mailing, investors should reject Miller and Modigliani's proposition that dividends and capital gains are perfect substitutes.¹⁸ According to Dunham (1989, Pg 74), the October (1987) share crash made many individual investors leave the sharemarket. Therefore, investors still may regard a share investment as risky.

Therefore individual investors should see dividends as a safer form of income than capital gains. As Scholz states (1992, Pg 264) "*dividends have the advantage of being regular and immediately liquid*" and there is an element of risk in a possible capital gain occurring.

¹⁶As there still is a preference for capital gains as not all shares dividend's are fully imputed and pensioners will prefer capital gains as they pay no tax at all on the income.

¹⁷ As dividends are regular.

¹⁸ For if they are perfect substitutes, one cannot be seen as being more risky than the other.

The responses should support this hypothesis as the available evidence should show that individual shareholders prefer dividend income to possible capital gains (and that dividends are a safer form of income).

Hypothesis 3: Private Investors believe that an increase in dividends signals an expected increase in company profits.

This hypothesis states that individual investors believe that when a company increases its dividend, it is because management believes its future profits will increase. Section 2 (questions iv) to question viii)) is designed to investigate this hypothesis.

If this hypothesis is correct, question iv) will have significantly more support than all other questions, as it asks whether the respondents believe that future profit increases will cause dividends to increase.

Most variables analysed in this section came from Partington (1989). In this analysis he identified a variety of issues related to changes (including decreases) in dividend policy. These factors included: profitability, liquidity, cash flow variables and investment variables.

This section analyses these four variables and includes a clientele based question (number viii)) and a question to test whether the respondents believe that a change in dividend policy is an attempt to fool investors and increase the share price.

Question iv) attempts to ascertain whether individual investors believe that an expected increase in profits is the major reason for a dividend increase.

This proposition has significant empirical support.¹⁹ Evidence in favour of this proposition includes:

- Healy and Palepu (1989) concluded that managers consider past, present and future earnings when setting dividends.
- Baker, Farrelly and Edelman (1985) concluded that dividends provide signals about the future prospects of a company.

¹⁹ Outlined in detail in the literature review.

- Miller (1987) stated that asymmetric information means that dividend changes can provide signals about the firm's future prospects.
- Partington (1989, Pg 171) stated that profits were the "*most important determinant of the size of dividend payments*".
- Manakyan and Carroll (1990, Pg 206 - 207) concluded that earnings are the main determinant of dividends and that dividends lag earnings.

However, research performed in New Zealand, according to Alexander and Blanchard (1992), provides only lukewarm support for the signalling hypothesis. Furthermore, individual investors have not been the target for this type of research before, therefore this question is exploratory in nature.

Although this research can be considered exploratory, it is expected that individual investors will agree with the hypothesis that an expected increase in profits can cause a dividend increase.

Question v) attempts to determine whether individual investors believe that a cash surplus in a company can cause a dividend increase.

Most literature regarding the signalling hypothesis has investigated the relationship between profits and dividends, however other factors must influence a firm's dividend policy. Partington (1989, Pg 169) states that the liquidity of the company is an important factor, as it affects the ability of the firm to pay dividends. In this study, liquidity variables were considered important but fell behind profits and dividend stability. When surveying institutional investors, Farrelly and Baker (1989, Pg 96) found that the respondents stated that profits were a better indicator of the level of dividends than cash flows.

The expectation is that respondents will agree with this statement. The primary reason for a sustained dividend increase is an increase in profits but many companies do

announce special one-off dividends due to cash surpluses.²⁰ However, this question should not get the same level of support that question iv) gets as most other research finds that profits rank higher than liquidity.

Question vi) attempts to ascertain whether individual investors believe that managers will increase the dividend in an attempt to increase the share price.

There is some support for the idea that increasing dividends can have a positive effect on the share price of a company. Baker and Farrelly (1988) commented that dividend changes may have an impact (positive in the case of a dividend increase) on share prices and that one of the most important reasons for paying dividends is to maintain or increase the company's stock price. Other studies have shown that there is a positive price effect for an increase in dividends (Asquith and Mullins (1983) and Healy and Palepu (1989)).

Signalling literature has discussed the possibility that individual managers may try to use dividend increases as a signalling mechanism to cloak the true state of their company. This is regarded as a short term tactic as it should be difficult to fool the market for a long period.

Therefore, the respondents should disagree with this statement, as the respondents should recognise that using the company's dividend policy as a short term tool to prop up the share price is a counter productive strategy in the long run.

Question vii) investigates whether a company with no immediate investment prospects would increase its dividend. It is a similar question to question v) as it investigates the possibility of company having idle assets and paying the investor dividends.

A shortage of possible investments was a variable included in Partington's analysis, and of the factors tested had the least effect on the level of dividends. Researchers have

²⁰Although they may choose to repurchase or cancel shares (applicable when the new Companies Act comes into force).

investigated the possibility of dividends being cut for investment projects (namely Woolridge and Ghosh) but the idea of dividends being increased due to a shortage of investment projects has not received a similar level of attention.

Therefore, the respondents should disagree with this statement, as having insufficient investment opportunities should not relate to an increase in dividends.

Question vii) is a clientele based question. It investigates whether individual shareholders believe that a company would choose to increase its dividends to attract a new class of investors preferring higher dividends.

According to Shefrin and Statman (1984, Pg 280) this is plausible as "*some investors would be willing to pay a premium for cash dividends*". Therefore companies may increase their dividend payout to attract a new class of investor. However, Miller and Modigliani state that one clientele of investors is as good as another, so there is no need for a company to do this.

Research has not been able to locate conclusive proof that a change in dividend policy will cause investors to change investments. Lakonishok and Vermaelen (1986, Pg 304) commented that the increase in trading volume after a change in dividends only relates marginally to a change in clienteles, at best.

Other researchers find that managers are unaware of the preferences of shareholders and even when they do, do little to try and cater towards these. Baker and Farrelly (1988, Pg 85) state that managers considered that the "*characteristics of shareholders are not an important determinant of dividend policy*". This was not surprising, according to these two authors, as firms would consider it too difficult and costly to ascertain the characteristics and preferences of their shareholders. Therefore, they would let their clientele seek them out.

However, some Australian evidence contradicts this. Hamson and Ziegler (1990, Pg 51) state that since the introduction of imputation credits, some companies have attempted

to satisfy the tax positions of their investors. To do this, they have restructured or initiated dividend selection programs to enable different classes of shareholders to receive income which best satisfies their tax positions.²¹ In order to do this, the companies must have some idea of the types of investors and their tax situation.

On the basis of this conflicting research background, the expected result of this particular analysis is uncertain. It is expected that the responses will vary and this could make the result inconclusive. With introduction of imputation credits, it appears feasible for a company to increase its dividend²² in order to attract new investors. However, whether New Zealand companies are aware of the composition of their investors remains unknown.²³ Finally, evidence points towards shareholders not altering their portfolio drastically if a firm alters its dividend policy.

In conclusion, for this hypothesis to be accepted, all the other statements (apart from question ix)) do not have to be rejected, but that question ix) will have the strongest support of any of the questions answered in this section indicating that the respondents believe that it is the most likely cause of a dividend increase.

²¹ This is true in New Zealand as many companies voluntarily pay supplementary dividends to foreign investors who can't benefit from imputation credits.

²² Assuming that it still has imputation credits available to distribute.

²³ Another problem is whether they will do anything about it.

Hypothesis 4: Private Investors believe a decrease in the dividend signals unfavourable news (such as a drop in profits) about the company.

This hypothesis attempts to analyse the other side of the dividend signalling hypothesis, that dividend decreases mean that a company's performance will deteriorate.

Previous research, from Lintner onwards, documents that managers are extremely reluctant to cut dividends. Even to the extent, as noted by Lintner (1956), that managers will not make dividend changes they may have to reverse. Baker and Farrelly (1988, Pg 86 - 87) commented that investors interpret dividend changes as signals since most companies increase dividends only when they are confident that they can maintain it. However, they noted that firms are "*reluctant to omit or cut dividends, even when the outlook warrants it*".

Therefore, dividend increases and dividend decreases do not have a linear relationship, given that managers are far more reluctant to cut dividends than they are to increase them. When they do increase them, a very important factor in this decision is the possibility that they will have to reverse it in the future.

According to the left wing argument there are acceptable reasons to decrease dividends. Dividends should be reduced if it is to the shareholder's advantage. Another, possibly advantageous reason for a dividend cut is to fund a profitable investment.

Section 3) employs questions ix) to question xiv) to investigate this hypothesis.

Question ix) tests the clientele effect. It investigates whether managers' would reduce dividends to attract a different type of investor, possibly one more interested in the possibility of capital gains rather than dividend income.²⁴

According to Elton and Gruber (1970, Pg 68), this may occur, as a "*change in dividend policy might cause a change in clientele*". This could also cause a short run decrease in

²⁴Such as the dividend policy of Robert Jones Investments (now Tasman Properties).

the stock price as the change in dividend policy is more apparent to *"investors who find it less favourable (present stockholders) than to those who find it more favourable"*.

According to Litzenberger and Ramaswamy²⁵ this could be entirely possible. In New Zealand it could be quite reasonable for a company not allocating imputation credits to decrease its dividends. Although, if the company did allocate imputation credits with its dividends then this would not be a valid reason for reducing dividends.²⁶

Miller and Modigliani hypothesis that companies have no real reason to do this as one clientele is as good as another. It is also unlikely that managers are concerned about their clientele as Baker and Farrelly (1988) noted that managers do not consider the characteristics of shareholders when setting dividends. Abrutyn and Turner (1990, Pg 492 -493) support this argument as they comment that in their survey of Chief Executive Officers in the US, 58% of the respondents claimed not to have any idea who their shareholders were. Secondly, only 18 per cent of those who claimed to know the make-up of their investor's, indicated that the marginal tax rate of shareholders was an important factor determining their dividend policy.

Two Australian researchers find evidence inconsistent with this. Hamson and Ziegler (1990, Pg 51) state that after the introduction of the imputation credit regime into Australia, companies have *"attempted to satisfy the tax positions of their varied investors"*. Due to their similarities with the Australian tax systems, New Zealand companies should follow this.

However, Lakonishok and Vermaelen (1986, Pg 304) believe that this clientele change effect would only be marginal at best. Firstly, few firms change their dividend policy, and of those, very few substantially alter it. Their results indicate that the increase in

²⁵Who proposed the tax clientele based optimal dividend theory

²⁶Unless the majority of shareholders are unable to make use of imputation credits, such as those in a low tax bracket or foreign investors.

trading volume due to a dividend change is minimal, to the extent that it does not indicate that investors' change shares when a firm changes its dividend policy.

The respondents should disagree with this statement. Although it appears that companies are becoming more sensitive to shareholders tax positions when setting dividends,²⁷ investors do not change portfolio composition quickly, when a company changes its dividend policy.

Question x) investigates whether companies are likely to lower their dividends to free up funds to use for investing purposes.

Ghosh and Woolridge (1988 and 1989) investigated the share price effects of companies who decreased dividends to use the funds for investments. Their analysis revealed an initial negative reaction to this event. However the company's share price recovered over a period of 12 months. Nevertheless, their research shows that companies do reduce dividends to use the funds for investment.

Partington (1989, Pg 169) comments that investment and dividend policy can be independent. According to this author, the empirical results are inconclusive, but it suggests that firms usually raise sufficient finance to allow independence between investment and financing decisions. Although, on occasion, a financing constraint forces interdependence between these two.

The respondents should agree (albeit slightly) with this hypothesis as it is plausible for a company to reduce dividends to free up funds for investment.

Question xi) deals with a similar issue, except that the company intends to reduce debt by reducing dividends.

²⁷ Especially after the introduction of imputation credits.

Again there is very little research on whether firms will attempt to reduce debt by reducing dividends. Partington (pg 169) comments that a company's leverage and level of debt may affect its capacity to pay dividends, but the available empirical evidence provides no strong conclusions. The results of his analysis showed little correlation (less than most other elements analysed) between debt reduction and dividends.

DeAngelo and DeAngelo (1990, Pg 1415 - 1421) investigated the relationship between dividend policy and financial distress. In their investigation, more than half of the firms sampled faced binding debt covenants in the year in which they reduced dividends. However, many sample firms reduced dividends "*when covenants were far from binding*". When this was analysed further, they found that few companies reduced their dividends to raise funding for binding debt covenants. Ravid and Sarig (1991, Pg 175) support this as they comment that managers are very reluctant to cut dividends, "*even in the face of debt repayment pressures*". This raises doubts about the importance of debt covenants in relation to a company's dividend policy.

The respondents should disagree with this question, as the available literature finds little relationship between financing and setting dividends.

Question xii) investigates the possibility that a predicted decrease in profits will cause a decrease in dividends.

There is considerable research linking dividend cuts to an expected decrease in profitability. DeAngelo et al (1992, Pg 27) conclude that income is a critical determinant of dividend changes. Due to managerial reluctance to cut dividends, it will only be done when earnings are especially poor. Therefore a loss is considered a necessary condition for a firm to cut its dividend. DeAngelo and DeAngelo (1990, Pg 1428) commented that the larger the decrease in earnings, the more likely the firm was to decrease dividends. Partington found profits (or the lack off) to be the primary determinant of the level of dividends paid.

The vast majority of research available shows that dividends correlate (highly) to profits. Therefore the respondents should agree with this question.

Question xiii) investigates the possibility that the company has insufficient liquidity to continue trading in its present form and pay the dividend. Therefore the company may be forced to reduce dividends.

Partington (Pg 169) comments that although this variable can affect the ability to pay dividends, mixed empirical evidence exists. It is plausible that a firm facing a financing constraint, such as a shortage of liquidity, may have to limit the growth of dividends.

Respondents should agree with this question, as a shortage of funds will reduce a firm's ability to pay dividends. This variable should not rate as highly as the profit variable.

Question xiv) is more of a dummy question. It is investigating a factor proposed by DeAngelo and DeAngelo (1990)

In their analysis, they investigated firms which cut dividends voluntarily. One explanation found for this was to enhance the firm's bargaining position with organised labour. These authors found evidence which supported this proposition while investigating the sample firms.

However, although DeAngelo and DeAngelo felt that these firms were able to legitimise this result as firstly, these firms were such a small part of the sample and secondly, the policy of reducing dividends to be able to increase wages has little empirical background.

The majority of the respondents are expected to be either uncertain or will disagree with this statement.

Conclusion

For this hypothesis to be accepted, question xii) will receive the strongest support out of any of those analysed here. The respondents should believe that the most important reason for dividend cut is an expected decrease in profits.

Hypothesis 4a: There exists an inverse relationship between the reasons for a dividend increase and decrease.

This hypothesis investigates whether an inverse relationship exists between dividend increases and decreases, so that any variable, such as a change in profitability, is just as likely to cause a dividend increase or decrease. To investigate this hypothesis, a comparison of the results from the four sets of paired²⁸ questions from section 2 and section 3 will indicate whether an inverse relationship exists.

If the distribution of the responses are the same (or not significantly different), then this indicates that the factor being analysed is just as likely (according to individual investors) to cause dividends to increase or decrease. However, if the distribution of responses to each set of questions are different, this indicates that the respondents believe that a particular factor (such as profitability) effects dividend increases and decreases differently.

Unfortunately there is very little literature available which has tested this proposition, although some evidence exists for the four sets of factors being tested. Due to the lack of literature available, much of this investigation is exploratory by nature.

The four questions included in testing this hypothesis are as follows. As an increase or decrease in dividends is due to:

- a) Question 4 and 12: An expected change in profits.
- b) Question 5 and 13: The company's liquidity levels.
- c) Question 7 and 10: The availability of investments.
- d) Question 8 and 9: The clientele effect.

²⁸ Questions dealing with the same variable, eg Question 4: Profit increase, and Question 12: profit decrease.

Section a: Expected change in profits.

According to the majority of signalling literature available, the primary cause of a change in dividends is the availability of profits. Examples of this are; Partington (1989) who finds profits to be the main determinant of dividends and DeAngelo and DeAngelo who agree that the primary reason for a dividend cut is a decrease in profits.

Therefore the respondents should indicate that profit changes are just as likely to cause dividend decreases as increases.

Section b: The company's liquidity levels.

Again little literature exists which has analysed this particular proposition. What is available indicates that changes in liquidity can affect a company's ability to pay dividends (see Partington (1989)).

Therefore, since there is very little literature available analysing this phenomenon, the expected result is for the distribution of the responses to be similar.

Section c: The availability of investments.

Of the factors analysed by Partington (1989), this factor had the least effect over the level of dividends paid. More evidence is available when analysing dividend decreases, as Ghosh and Woolridge (1988 and 1989) show that companies do decrease dividends to free up funds for investing purposes.

Again, due to the lack of evidence available, this set of questions is expected to have the same distribution of responses.

Section d: The Clientele effect

Of the four sets of questions analysed, this particular pair of questions has the most empirical support available. According to Litzenberger and Ramaswamy, a company should set their dividend policy in accordance with the tax laws, as to maximise the

shareholders' wealth and cash-flow. Therefore a company should be equally likely to cut or raise its dividends in order to provide the greatest benefit to its shareholders.

Therefore, these two questions should receive a similar distribution of responses.

Conclusion

Company managers do increase and decrease dividends for different reasons, for as Lintner noted, managers are far more reluctant to cut dividends than they are to increase them. However, few researchers have analysed the relationship between the variables involved with setting dividends and their effect on dividend increases and decreases.

If the hypothesised results do not occur, this will indicate that investors believe that dividend increases and decreases occur because of different reasons.

Hypothesis 5: There exists among New Zealand Private Shareholders an "age clientele", in which (in contrast to younger shareholders), older shareholders have a preference for shares paying a higher dividend.

This hypothesis investigates the proposition that older investors form a clientele which chooses investments which pay a higher dividend.²⁹ To investigate this hypothesis, this analysis uses the results from section one (especially questions ii) and iii)), section 4 and section 5 of the survey.

According to the age clientele hypothesis, as an individual gets older, they should disagree with question ii) and agree with question iii) more strongly than a younger individual. This may extend to question i) as an older individual may believe that dividends have more of an influence on the value of a share more than a younger investor. A similar pattern should occur in section 4; as the individual gets older, dividends (and imputation credits) will become more important to them.

As has been shown in the section outlining the clientele effect, there is considerable evidence supporting the existence of age clientele's. According to Crockett and Friend (1988, Pg 604) this investor subgroup "*may quite rationally show a preference for dividends*". Furthermore Lewellen, Stanley, Lease, and Schlarbaum (1978, Pg 1396) found that shares with a high dividend yield have a "*disproportionate concentration of older investor owners*".

The corresponding opposite effect exists in younger investors. Baker and Haslem (1974, Pg 1261) segregated private investors into two distinct classes. The first consisted of investors concerned with capital appreciation and these investors were younger on average. This class of investors was more willing to sacrifice current dividends for future price appreciation. The second class consists of investors concerned with income from dividends and these tended to be older. This effect receives confirmation from Lease, Lewellen and Schlarbaum, (1976, Pg 56 - 57) who found that as the investor's

²⁹That is, compared to younger investors.

age increased "*short term capital gains diminish in proclaimed importance*" and the investor places more emphasis on dividend income.

However, it is uncertain whether an age clientele hypothesis will exist in New Zealand which is due to the following reasons:

- A) The first reason is the sur charge on the pension. If the individual chooses to accept the pension and earns above a certain level of income, they become liable for an extra 25 cents tax on every dollar earned.
- B) Secondly, no capital gains tax exists in New Zealand (unless the individual is identified by the I.R.D as a frequent trader). Therefore, income derived from selling securities has no tax implications for a retired individual on the pension.
- C) Finally, individuals have the choice to accept the pension so wealthier individuals may choose not to and avoid the sur charge.³⁰ These individuals pay tax at the same rate of an ordinary taxpayer.

The age clientele hypothesis was developed for a tax system in which similar tax rates existed on capital gains and dividend income. However, in New Zealand, if an investor receiving the pension was to receive an unimputed dividend, they would pay approximately 58 cents on the dollar in tax. If they received a fully imputed dividend, they would only pay 25 cents tax. If they sold shares to obtain an income, they would only pay the transaction costs (to the broker) involved. Table X reviews this situation.

³⁰For the purpose of this research no methodology is available to see whether the respondent receives the pension or chooses not to.

Table 2.1: Effective tax rates for those receiving the pension

Source of Income	Tax Rate	
	No Pension	Pension
Unimputed Dividends	.33	.58
Imputed Dividend	0	.25
Capital Gains	0	0

Conclusion

This does not mean that an age clientele effect doesn't exist in New Zealand. These issues may make it more difficult to identify one, but despite this, older shareholders may prefer to fund their consumption (when older) from dividends. Evidence of this could exist in an analysis of the older shareholder's preference for imputed dividends. If they prefer to fund consumption from dividends, then imputation credits should also be very important.

Part III

Background to Empirical Research

Research Methodology

The purpose of this thesis is to ask New Zealand shareholders about the impact of dividends on company valuation and what they communicate about a company. To achieve this goal a mail survey was used.

For the research in question, this has several distinct advantages:

- a) It is very cost effective (being an overriding influence).
- b) It enables New Zealand shareholders (not just a sub-section) to be analysed.
- c) The research will be generalisable to the population.

According to Fowler (1984, Pg 211) the goal of a survey is to measure the respondent's attitude towards a subject, so that it will hopefully describe their behaviour in terms of the subject being analysed. Ajzen and Fishbein (1980, Pg 40) paraphrase this as "*intentions determine behaviours*". They caution that a measure of intention (as given by a survey) does not always give an accurate prediction of behaviour as the individual's intention may not remain stable over time. Nevertheless, research supports the assertion that the views' respondents express in a survey, should translate to their real life activity.

For a survey to be effective, according to Fowler (1984, Pg 209), the questionnaire must translate the research objectives into:

- questions which resolve the objective,
- motivate the respondent to respond.

Therefore, after choosing to use a mail survey to analyse the research objective, the researcher must take all the appropriate steps to ensure it asks the relevant questions and designed in such a format that the respondents will reply.

Mail Survey Advantages

Moser and Kalton (1971, Pg 257 - 258) highlight several advantages of using mail surveys to collect data:

- a) It is cheaper than other methods (such as telephone surveys).
- b) The researcher can contact a widely spread population, which is especially valuable when "*rare and scattered populations*" are being investigated.
- c) It is a relatively quick method for conducting a survey
- d) The use of a mail survey avoids some of the biases involved with other types of surveys, such as interviewer bias.
- e) A major advantage is that the respondents have time to think about their answers and change them if they wish.

A further advantage of a mail survey is that the respondent remains anonymous. Individual shareholders will be more likely to divulge information if their responses are confidential and they are given assurance of this.

Another important factor in the choice of a mail survey is that it should be the most effective methodology available to contact all potential respondents. A telephone survey may have difficulty in contacting the individual for a variety of reasons. Such as: the respondents may not be available and may be difficult to contact.

Mail Survey Disadvantages

Moser and Kalton (Pg 260 - 261) also highlight several of the disadvantages involved with mail surveys:

- a) The questions have to be simple, straightforward and easy to understand. This is a complicated factor in the design of a questionnaire as a survey has to deal with all levels

of ability and knowledge. Therefore all respondents must understand the questions the survey asks them.

- b) The answers received to the questionnaire have to be accepted as final, as no interpretation of a possibly incorrect and invalid answer is allowed.
- c) The survey designer can never be sure that the right person completes the questionnaire, even if the survey is addressed to the individual being surveyed.

According to Wallace and Mellor (1988) one of the largest concerns with mail surveys is the problem of its low record of response rate. Surveys receiving a low level of response are very susceptible to the problems of non response bias.

Another major problem with surveys, according to Brennan (1991, Pg 73) is that respondents may no longer believe that their responses stay confidential. This is due to "Sugging", where surveys are part of a marketing technique.

Selection Procedures

The shareholders used in this survey were randomly selected from eight companies. The process of selection entailed selecting the companies, then selecting the shareholders.

The objective behind the selection of the companies was to choose a group of companies with a variety of dividend history's. The eight (chosen as an arbitrary level) companies selected conformed to four classifications (two in each classification) related to the trend in their dividend payout over the last four years (up to 1992):

- a) Those who didn't pay a dividend,
- b) Those paying a stable dividend,
- c) Those whose dividends had increased over the last two to three years
- d) Those whose dividends had decreased over the last two to three years.

Then to stratify the sample further, the eligible companies were ranked according to their relative size (in terms of capitalisation¹ or share turnover²). When completed, a large company and a small one (hopefully in terms of both market capitalisation and turnover) in each dividend classification will have been selected.

This process should hopefully overcome a possible bias of shareholders targeting specific types of companies with specific dividend policies. By selecting companies with this range of attributes, there exists a good chance of obtaining a well-stratified survey population.

The data used to form this sample came from the New Zealand Stock Exchange Sharemarket Review. The only restricting criterion for inclusion in the sample was that the company had to be New Zealand registered and used Registry Managers in Auckland as its register.³

The companies selected were:⁴

a) No Dividends

Dividend in Cents	1989 dividend	1990 dividend	1991 dividend	1992 dividend	capital million	turnover million
Triumph Industries Ltd	0	0	0	0	1.657	17.762
Kingsgate Int'l Corp. Ltd	0	0	0	0	131	10.744

Kingsgate was the largest company (according to its paid up capital) consistently paying no dividend for the last four years.

¹ As it represents the shareholders investment in the company at par value.

² As it gives a reasonable indication of how frequently traded the security is. This will be important as companies that trade more often usually tend to have a higher concentration of institutional ownership.

³ This should not introduce a significant bias as the majority of New Zealand companies use Registry Manager's for their share registry. Also, if shareholders own shares in several companies, then the majority of these companies should be registered at Registry Manager's.

⁴ Before the 1993 year end annual reports were available.

b) Constant Dividends

Dividend in Cents	1989 dividend	1990 dividend	1991 dividend	1992 dividend	capital million	turnover million
Milburn New Zealand Ltd	18	20	20	20	20	412
Brierley Investments Ltd	10	11	9	9	1409	821.944

Both these companies paid relatively stable dividends over the last four years.

c) Increasing dividends

Dividend in Cents	1989 dividend	1990 dividend	1991 dividend	1992 dividend	capital million	turnover million
U-Bix Business Machines	5	17.5	21	23.5	.196	5.689
Wilson and Horton Group	6	15	15	17	87.459	22

Both these companies increased dividends over the last four years.

d) Decreasing Dividends

Dividend in Cents	1989 dividend	1990 dividend	1991 dividend	1992 dividend	capital million	turnover million
New Zealand Light Leathers Ltd	17.5	17.5	5	7.5	3	.779
Fletcher Challenge Ltd	27	27	27	14	758	321

Although the New Zealand Light Leather dividend has increased slightly over the last year, it is still below its 1990 level where it cut its dividend to 5 cents.

Individual Shareholder Selection

The listing of New Zealand shareholder came from Registry Managers in Auckland.

The list of shareholders came from a random selection of 35 individuals⁵ from each of the companies chosen.

⁵Excluding any companies or other institutions.

Survey Design Issues

The available literature provided good guidance on designing a questionnaire, and better advice on what to avoid. According to Erdos (1970, Pg 45), the most unfortunate mistake to make when designing a questionnaire, is to produce something reminding the recipients of an "*income tax form*". The suggested overall philosophy behind designing a survey is to "*give the impression of a neat printed page which is easy to read and easy to fill out*". This was the guiding philosophy behind the design of the survey.

The other major influence over the design of the survey was to allow all the recipients to be able to understand the questions and complete the survey. To do this, according to Moser and Kalton (1971, Pg 320), the survey designer must put themselves "*in the position of the least educated respondents*". This is especially relevant when designing a questionnaire which is to be distributed to a wide section of the community.

Therefore, the survey was designed so it would appear short and relatively easy for the respondent to complete. Erdos (1970, Pg 39 - 42) establishes several guidelines to use in the design of a survey:

- The survey instrument had a four page limit imposed upon it,
- The survey avoided illustrations and pictures because it would make the questionnaire look too much like an advertisement,
- The survey did not use coloured paper, because this makes a survey resemble junk mail,
- The final piece of practical advice was to print on both sides of the paper.

When compiling the questionnaire, the first step was to group the questions into their relevant sections. Therefore, the survey was divided up into five sections; the first investigated optimal dividend theories, the next two investigated dividend increases and decreases, and the fourth investigated the influence that dividends have over share valuation. The fifth asked for two demographic variables. Erdos (Pg 48) states that it is advisable to group questions into sections by subject matter.

The first question in a survey is of great significance. According to Moser and Kalton (1971, Pg 346), the early questions should be easy and interesting, not on sensitive or difficult topics and the questions should flow in a logical manner. Erdos (Pg 60) states that the introductory question should connect the survey with an issue which is very important to the respondent, or to the subject matter. Therefore, the most obvious question, given that the covering letter informed the respondents they were completing a survey of dividend policy, was to ask them whether dividends affected the price of a share.

From this stage, two choices of question flow for a survey exist. The first is the funnel sequence, where each question relates to the previous question and the survey grows more detailed as it progresses. According to Bailey (1982, Pg 221), this approach helps the respondent recall information more efficiently. The other suggested approach is the 'Inverted Funnel Sequence' where narrower questions about smaller issues precede broader questions. This type of question flow is useful when the survey topic is not motivational and it can help the respondents to begin with easier questions and end with the more difficult ones.

The inverted funnel sequence of questions appeared to be the most appropriate form of question flow to adopt here. The survey investigates some very difficult issues (the relative impact of dividends on share valuations), and for the reasons highlighted above, the question flow suited the topic better. Therefore (excluding the demographic variables obtained last), the first section was relatively straightforward. The next two sections were very similar and reasonably simple, while the last section, by its own exploratory nature, was difficult, and placed near the end.

The next step was to consider question design, as two types of questions exist, closed ended and open ended. Bailey (Pg 214) states that closed ended questions are suitable when the objective is to "*lead the respondent to agree or disagree with a specific point of view*". Since the objective of this thesis is to investigate dividend theory and accept or

reject the hypotheses, this form of question format seemed appropriate. Therefore, the respondents (for the most part) were answering a Likert scale question.⁶ However, given the exploratory nature of some of the areas analysed, the survey employed open ended questions if the respondent thought that they had something more to add. The main use of these questions will be to guide further research if the questions used are misspecified.

There are several advantages and disadvantages involved with the use of this type of question design. According to Bailey (Pg 213 - 214) close ended questions introduce a bias to the research as it forces the respondent to choose from the given alternatives. On the other hand, a major advantage is that closed ended questions require less motivation from the respondents and this may improve the response rate.

The only other major consideration in the design of the questionnaire is the choice of question type. Surveys appear to use two main types of closed ended questions; ranking and ratings. According to Bailey (Pg 221) surveys use ranking type questions when the researcher requires information regarding the degree of importance that people give to a set of attitudes or objects. Surveys use rating to test how much an individual agrees or disagrees with a particular statement. Since several propositions are being tested to see whether individuals agree or disagree with them, rating appears most applicable.

However, the use of a ranking scale would be very effective in investigating the information signalling hypothesis, as the individual could rank the factors most likely to cause a dividend change. This appeared to have major advantages, but the available literature highlights several drawbacks of this method. Bailey (Pg 222) states that research has shown that respondents, when asked to rank values or items, will rank the items appearing first higher than the later items. Secondly, Erdos (1970, Pg 69) states that a significant problem with ranking is that the respondents may not be able to

⁶Even section four uses an adjusted form of a Likert scale.

choose between the possible alternatives and "*then may have to force the issue or give a bad answer or not answer at all*". It appears the use of the ranking methodology by itself is unsafe.

A possible solution is to use a combination of both the ranking method and the rating method. Erdos (1970, Pg 69) admits that the use of both ranking and rating questions in a survey can be useful, but he does not advise the use of both systems on the same questionnaire, as the switch from ranking to rating, "*will tend to confuse the respondents*". Therefore, the questionnaire avoided using ranking scales and all the questions were rating questions.

The survey was extensively pre - tested, for according to Moser and Kalton (1971, Pg 310), the use of a pilot study is a very helpful tool as the questions require testing. The first group to pre-test the survey were a dozen stage 1 accounting students (who owned shares). Although these students were younger than the average respondent (the oldest still being in their 20's), they all owned shares and would hopefully have a similar level of investing experience as the least experienced respondents completing the survey. The survey was also pre-tested on several staff members of the department, especially those with experience in the design and implementation of surveys. Finally, it was pre-tested at a Lawyers firm, on both the secretary's and the lawyers. All the groups pre-tested indicated that they had no major problems completing the survey and each group did offer advice and suggestions for improving the survey's design.

Covering letter

According to Bailey (Pg 228) the covering letter for a survey should do four main things. It should identify the organisation conducting the research, explain to the respondents the purpose of the study, tell them why the research is important and assure them that their responses will remain confidential. Moser and Kalton (1971, Pg 303) add two more items to this list, as a covering letter should; tell the subject that they represent a cross section of population and tell them what they must do.

When designing the initial covering letter, these points formed the basis for its construction. The two follow up letters reiterated some of the more important points, especially the benefit to the research achieved if they replied.

According to Erdos (1970, Pg 105 - 109) the letter should look as if personally written to the subject, such that the recipient's name is "*typed in to match the body of the letter*" and the letter should end with the sender's signature signed in blue pen. The goal of the covering letter is to give the reader the impression that they are very important to the research.

The final element for the letter, was to type it on departmental letter head. This, as well as stating it in my introductory letter, would highlight to the subject that the survey is for research purposes and is not an attempt at Sugging. Several researchers have noted that university endorsement enhances the response rate of survey's (see Scott (1961), Fox et al (1988)).

Other specific efforts made to increase response rate

Apart from the ideas previously mentioned two other procedures were used to increase the response rate.

The first was to enclose a self addressed stamped envelope so the respondent did not have to pay to respond to the survey. Fox et al (1988) reports that this has a positive effect on the response rate.

The other step used to increase the response rate was to use follow up mailings. Fowler (1984) comments that after ten days from the initial mailing, all the remaining non-responders should be mailed a reminder letter. This letter should emphasise the importance of the study and a high rate of response. Then, after another ten days, he suggests mailing another letter, again emphasising the importance of a high return. This time another questionnaire should be included for "*those who threw one away*". A final step, if necessary, is to call the remaining non-responders in order to get them to

respond. Herbelien and Baumgartner (1978) report that the use of follow ups is normally successful in increasing the overall response rate.

The design process followed all the appropriate steps as shown by the literature available. The survey content should interest the respondents and enhance the response rate. Brennan (1991, Pg 79) states that most respondents refuse to participate in surveys because of "*temporary conditions*", such as a lack of interest in the topic or that they were too busy. Hopefully the survey design will overcome these problems.

Analysis of Results

This study utilised two separate statistical packages to analyse the results, the first being the SAS statistical package and the second being 'The |STAT' Version 5.3 (1987). The SAS package was used for creating histograms and conducting regression analyses, while 'The |STAT' package was used for conducting the Chi Square tests.

The first problem involved in the analysis of the data is to decide what form of statistical methodology to use. The majority of data collected results from a Likert Scale analysis. Most currently available statistical literature suggests that it is an ordinal scale, as it is very difficult to measure the 'distance between each point' in a Likert Scale (see Zikmund (1991), and Aaker and Day (1990⁷)). The suggested methodology for analysing this form of data is non-parametric statistical techniques.

The non-parametric techniques applied to this analysis was the Chi Square analysis. Other non-parametric techniques such as the Wilcoxon Matched-Pairs Signed-Ranks Test and the Mann-Whitney Test were not appropriate for this research, given the limited range of results (a whole number between 1 and 5) and a large number of 'equal ranks' in the results. These patterns made the use of these methodologies impossible.

⁷Although in their 1986 version, these authors reported that Likert Scales could be regarded as a 'quasi-interval' scale.

According to Aaker and Day (1990) analysis of this type of data, is normally based on the assumption that the data is of an interval type (rather than ordinal). Furthermore, previous researchers working in finance who have used the Likert Scale to examine dividend policy phenomena (such as Baker, Farrelly and Edelman (1985) and Baker and Haslem (1973)) have all used basic parametric statistics to analyse their results. Therefore, this research will utilise parametric statistics.

Furthermore, parametric Z score tests (given that the sample size is well in excess of 30) will be used to analyse the data, mainly for sections 1, 2 and 3. In the initial analysis of section 4, where the respondents had indicated uncertainty, these data points were withdrawn from the analysis to give the data the form of an interval scale. However, when analysing section 4 further, the application of parametric methodologies is unacceptable as this data does not conform to the requirements of interval data. The initial analysis of section 4 using this methodology is only exploratory, justifying the methodology used.

The analysis also investigated the skew in the data. The results obtained for this may be unreliable since most of the data will have a value between one and five (depending on the response). Therefore, a difference will occur between the result achieved and the mean (which can be 3.47). This may make the results of this analysis less reliable as they may be influenced by how far away the mean is from one of the ordinal data points. Nevertheless, the investigation discusses the results obtained from the measure of skew tests.⁸

These different methodologies will also provide the added benefit of a form of double checking, as each of the methodologies results should hopefully complement each other and provide more evidence in favour of or against the proposition being analysed.

⁸This did not include questions' 15 to 23 as the data does not have very strong interval qualities.

When analysing the results, an alpha (α) level of 0.05 or less is significant. Any result which showed a lower level of significance is not conclusive or significant in this research.

Preliminary Investigation

After excluding the potential respondents who did not reply, could not reply and did not fill the questionnaire out correctly,⁹ the overall useable response rate is 68.4%. This high response rate justifies the methods used to increase the response rate.

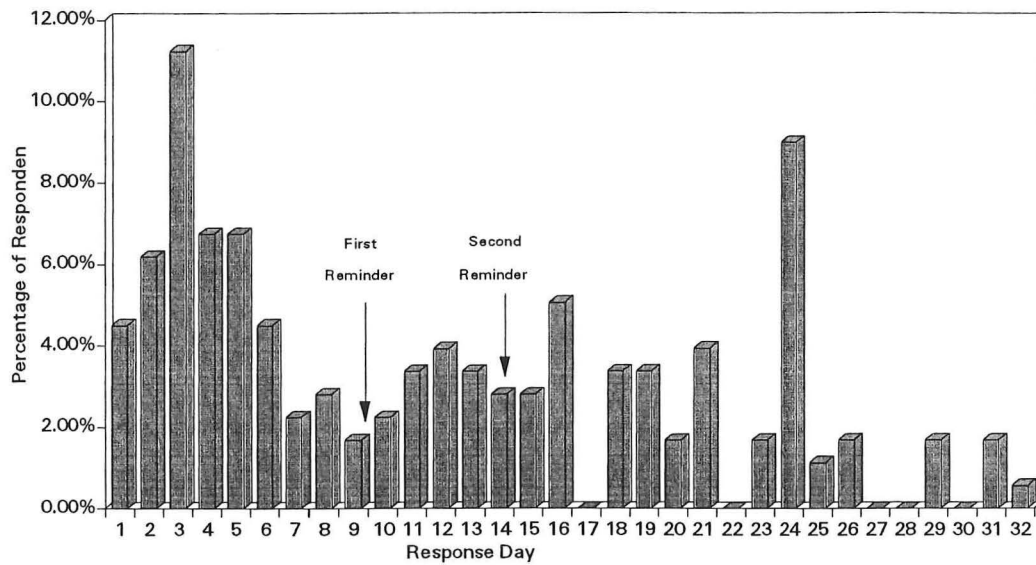
<u>Response Analysis</u>		
Total Sample		280
Moved, no forwarding Address	18	
Unable to reply ¹⁰	9	
Effective Sample		253
Non - responses	65	
Response received		188
Refusal to participate ¹¹	10	
Unusable response	5	
Useable responses		173
Response Rate		74.3%
Useable response rate		68.4%

After sending out the first copy of the survey on the 4th of August, the responses returned over a period of 32 working days. On the 19th of August, all non responders were sent a follow up letter and a second follow up (this one including a further copy of the survey) was mailed on the 27th of August. Both these follow ups appeared to be relatively successful at increasing the response rate, as indicated by graph 3.1

⁹The criteria for inclusion in the overall useable response was that the respondent had completed at least one of the sections in the survey (as the survey is being investigated in sections). As it was, respondents who were excluded had not fully completed any of the sections.

¹⁰Respondent physically unable to respond, due to death or illness.

¹¹Includes those who claimed that they had insufficient knowledge to complete the survey.

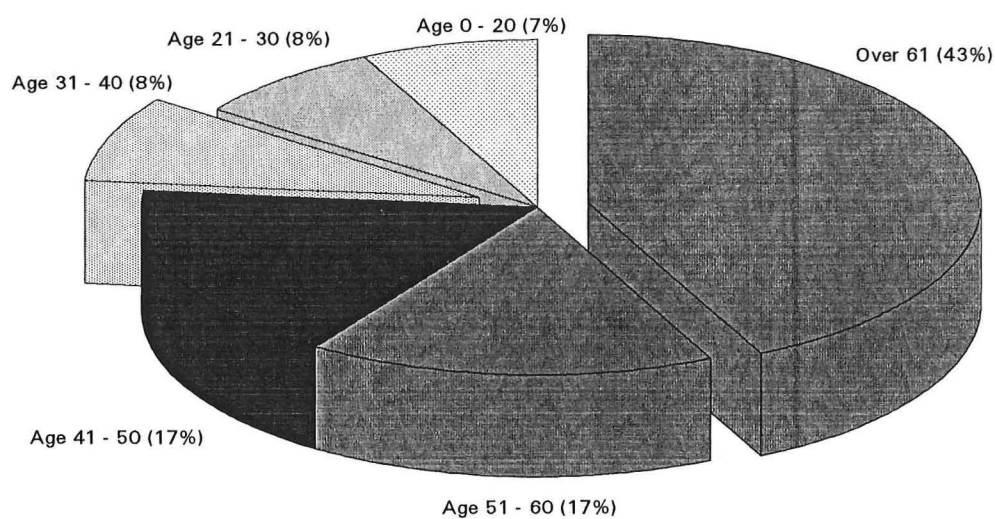


Graph 3.1: Responses to the survey.

Demographics

The survey only collected two forms of demographic information. The age of the respondent and the number of shares that each respondent owned at the time they were completing the survey.

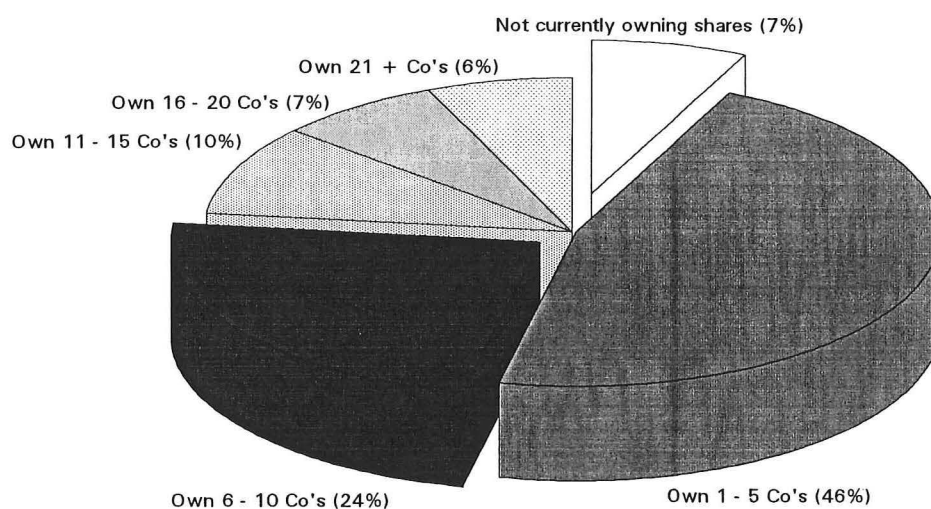
Graph 3.2 : Age of the respondents



Of the useable responses, four individuals refused to disclose their age, which left 169

(98%) respondents to analyse the clientele effect. The average age was in the 41 - 50 range. However, the clear trend is that most responders were older than 50 (60%).

Graph 3.3: Portfolio size of the respondents.



The other demographic variable investigated was the size of the portfolio that each individual owned. Of these, 15 respondents refused to disclose how many companies they owned shares in. This left 157 (91.3%) useable responses for this demographic variable. The average size of a portfolio was about 8 companies, however outliers influenced this result, as the mode was 2 companies. The survey included this question to investigate whether the shareholders listed at Registry Managers (NZ) Ltd, still owned shares, as the results indicated that 7% of the respondents currently did not own any shares.

Non Response Bias in Mail Surveys

According to Clausen (1947), four main sources of bias exist when conducting a survey: non-response bias, a group replies instead of an individual, a response being received from other than the addressee and that the respondent consults sources of information when their level of knowledge is being surveyed. Of these, the one with the highest propensity to invalidate research is the problem of non-response; where the subject does not respond to the survey. According to Fowler (1984):

No Mail Survey can be considered reliable unless it has a minimum of 50 percent response, or unless it demonstrates with some form of verification that the nonrespondents are similar to the respondents.

Therefore, it is very important to try and reduce this problem. This is overcome by increasing the response rate from the survey to a sufficiently high enough level (which is economically viable).

Researchers have noted that several differences exist between responders and non-responders. A consistent finding about non-responders (see Bachrack and Scoble (1967), Ognibene (1970)) is that they tend to come from lower income groups. Whereas, for responders (especially early responders) the inverse is true. Clausen (1947) notes that responders, in general, have a higher education level from non responders. Fowler (1984) also reported that better educated people normally reply faster.

Of the research conducted in New Zealand, Brennan (1991, Pg 79-82) found that most non responders refuse to participate in a survey because of "*temporary conditions*", such as having a lack of interest in the topic or being too busy. In this study, non responders were classified as:

- 14% had forgotten to complete it,
- 9% didn't get around to it,
- 14% felt it was an invasion of their privacy,

- 9% thought the questionnaire was of poor quality.

This author comments that on the whole, non-respondents thought that mail surveys were either too personal or took too long to complete.

Therefore, all survey research must attempt to overcome this problem (initially by ensuring a high response rate) and then attempt to identify the extent of the problem. According to Wallace and Mellor (1988, Pg 132 - 133), there are three types of tests available to investigate for the existence of non-response bias:

- a) The first is to check the responses by date of reply,
- b) The second is to compare the respondents against known characteristics of a sampled population.
- c) The third is to compare the characteristics of the responders to non responders.

The first approach is the most appropriate to adopt in this research. This entails comparing the replies of early and late responders to see if there are any significant differences between the two. If there is, this indicates the existence of non response bias. According to Wallace and Mellor (Pg 135) late responders¹² have similar characteristics to non-respondents. Other researchers (Fowler (1984)) acknowledge that this is the appropriate technique to analyse this problem.

The other two techniques are not appropriate for this research, as insufficient information exists about the potential population to make any inferences.

Assessment of Non response Bias

The technique used to assess non-response bias is to compare the responses of late responders to those of early responders. This particular analysis compared the first 50 responders to the last 50 responders. The choice of the number of respondents was an arbitrary one, but it should highlight the differences between the early responders and

¹²Actually defined as very late responders.

the late responders. This will give a better indication of the potential for non response bias.¹³

A Chi Square Goodness of Fit test was used to test for differences in overall distribution (that is, did the pattern of responses for the early responders match that of the late responders) in the proportion of respondents who agreed and disagreed with a question (whether late responders were more likely to agree or disagree with a question than early responders).

Statistical literature supports the use of non parametric statistics as it points out that it is very difficult to assign a set interval to results obtained from a Likert Scale. Therefore, an analysis of the differences in those agreeing, uncertain or disagreeing should be the most reliable test.

Results

Statistically significant differences between late and early responders existed for six of the questions (mostly in section 3). However, there was no significant differences between the age of early and late respondents.

The differences in responses are:

Question 9: Significantly different at the 0.025 level.

Later responders do not disagree as much as earlier responders to this question. When analysing whether later responders agree or disagree more with the proposition, the analysis indicated a significant difference between early and late responders ($p = 0.05$) but this result may be inaccurate given the small size of the expected frequencies.

¹³That is, comparing very later repliers to very early repliers to gain a more stringent indication of possible non-response problems.

The next five questions in which a significant difference between the early responders and late responders occurred, supports the available research, as later responders have a higher level of uncertainty than earlier responders.

This occurred in Question 11 ($p = 0.05$), Question 12 ($p = 0.01$) Question 13: ($p = 0.001$), Question 18 ($p = 0.025$) and Question 19 ($p = 0.001$)

Therefore, it appears that some form of non-response bias occurs, as late responders are more likely to be uncertain about a question (hence the non responders are more likely to be uncertain about a question). When reviewing the data, the trend of increasing uncertainty is apparent, but it is only significant for these questions.

Managing Non-response bias

This analysis reveals that of non response bias does exist in the data collected. However, this problem is unlikely to be significant. This is because:

That a high proportion of the respondents are uncertain about their response for each question. Such examples are question 19 (23%), question 20 (33.5%) and question 23 (34.1%). Yet a significant difference between late and early responders occurred only for question 19.¹⁴ Therefore, high levels of uncertainty will exist for some of the propositions analysed.

That, the high response rate achieved for the survey reduced the possibility of non-response bias.

¹⁴Out of this subset.

Table 3.4 from Fowler (1984, Pg 51) supports this assertion.

Response Rate (%)	Percentage of non-respondents with characteristics						
	10	20	25	30	40	50	75
80%	28	26	25	24	21	19	13
70%	31	27	25	23	19	14	3
60%	35	28	25	22	15	8	
50%	40	30	25	20	10		

(True population mean = 25%)

This table shows that as the response rate increases, a higher level of deviation in the non-respondents must occur before any non response bias becomes significant. Since this survey has achieved a 70% response rate, a high level of deviation in the non-respondents must occur to make non-response bias a significant problem. It appears that no significant non response bias will occur, therefore no attempt to compensate for it will occur.

Assessment of Item Non-response

According to Gilley and Leone (1991, Pg 282), item (or partial) non-response occurs when a questionnaire contains one or more questions which the respondent does not answer. Although this does not invalidate the response, it does pose practical problems when applying statistical packages, such as SAS, as they will exclude those respondents' answers from the analysis.

These authors comment that this particular problem has received little attention in the literature, but a few standard techniques are available to address this problem. According to these two authors, the typical procedure is to substitute the mean value from all respondents for an incomplete answer, but the researcher must be certain that these items are missing at random.

When the responses with instances of item non-response were reviewed, it was apparent that only a very small proportion of surveys returned had this problem. When analysing them in detail, some respondents indicated that they were unable to answer the question.¹⁵ In these instance's the analysis substituted the response representing uncertainty, as this is the closest approximation to their views.

For the remaining cases, the accepted methodology is to substitute the mean value in for the missing data point. When using parametric statistical techniques with interval data, this methodology is appropriate (when the missing points are random). However, since most of the analysis used in the research utilises non-parametric statistic techniques, substituting the mean value creates a new ordinal data category. Therefore, it appears most appropriate to substitute in the value representing uncertainty for all instances of item non-responses. It also makes more intuitive sense that an individual who did not respond to a question would be uncertain about it rather than agreeing with the mean response.

¹⁵As either they couldn't understand the question or disagreed with the form of the question.

Explanation of the Results:

Coding of the responses began after the majority of surveys had returned.¹⁶ To make the analysis easier to understand, an explanation of the methodology used to categorise each answer follows.

For Questions 1 through to 14. The Question format was as follows:

Question 1: Dividends affect the value of a share.

Strongly <u>Agree</u>	<u>Agree</u>	<u>Uncertain</u>	<u>Disagree</u>	Strongly <u>Disagree</u>
5	4	3	2	1

Every time the respondent answered that they strongly agreed with a proposition, the answer equated to a 5 on the scale. If they were uncertain, the answer equalled 3.

Therefore, when the mean of the results was significantly greater than 3¹⁷ (indicating uncertainty), then the respondents agreed with the proposition and if the mean was significantly lower than 3 they disagreed with it.

For Questions 15 through to 23: the same principle applied.

Question 23: Comparing Imputation Credits to the Earnings Per Share factor.

	<u>More Influence</u>	<u>Same Influence</u>	<u>less Influence</u>		<u>Uncertain</u>
Imputation Credits have	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	than EPS	<input type="checkbox"/>
	4	3	2		1

Therefore, when the individual answering the question thought that the factor on the left was more important (this time being Imputation credits), they would place a tick in the box provided and these responses received a 4. If the individual thought the other value

¹⁶Of those that would return.

¹⁷As determined later.

was more important (Earnings Per Share), they placed a tick in that box and the response equalled 2.

If the respondent felt that they both had a similar effect on the price of share they ticked the box labelled 'same influence', and this response equalled 3. Finally, if they were uncertain about the relative relationship that each of the two factors had on the price of a share, they ticked the box on the far right of the line and this equalled 1.

When conducting the parametric analysis of the mean, the analysis withdrew all the respondents who were uncertain. This gave the data properties more akin to interval data. The next step was to subtract one from all the remaining results (so 2 became 1). Therefore, if the mean of the results for a particular question was 2, the respondents indicated that they believed that the two factors presented had the same influence. If the mean was significantly greater than 2, it indicates that the respondent believes that the factor on the left is more important and if the result is less than 2, it indicates a high preference for the other factor.

Part IV

Results from Empirical Research

Hypothesis 1: Individual Investors believe that dividends affect the value of the share

This hypothesis is tested in two parts (as discussed previously). First, question 1 investigates the proposition that individual investors believe that dividends affect the value of a company's shares. Secondly, section four will investigate the influence that dividends have on share valuation.

Results: Section 1

The following table summarises the results for this question.

Question 1: Dividends affect the value of a share.

Strongly <u>Agree</u>	<u>Agree</u>	<u>Uncertain</u>	<u>Disagree</u>	Strongly <u>Disagree</u>
34(19.7%) ¹	118(68.2%)	12(6.9%)	8(4.6%)	1(.6%)

<u>Summary Statistics</u>			
Mean = 4.02	S.D. = 0.71	Std. Error = 0.05	Z score = 18.8
Chi square statistic = 268.87	Skew = -1.18	Kurtosis = 5.87	

This is a very significant result. Over 87% of the respondents agreed with the proposition that dividends affect the value of a share. The evidence is important as the Z score indicates significance beyond the 0.01 level. Also, the high chi square statistic indicates that the responses were not random for this question and the measure of skewness indicates that the mode level of responses skew to the left (stronger level of agreement).

This result is not surprising given that the majority of research available has been able to locate some correlation or relationship between a firm's dividend policy and its share price (such as Farrelly and Baker (1989) and Jose and Stevens (1989)). What is notable, is the extremely high level of support this proposition receives. It is evident that individual investors believe that dividends do affect the value of a share.

¹ Actual responses and (Proportion of respondents choosing this alternative).

Section 4:

Section 4 investigates the relative influence that each of the five factors (described previously) has over the value of the share. As noted previously, the respondents who indicated that they were uncertain were included in the non-parametric analysis but were excluded from the parametric analysis. The summary of the results is as follows:

Question 15: Comparing dividends to the Earnings Per Share.

	<u>More Influence</u>	<u>Same Influence</u>	<u>less Influence</u>	<u>Uncertain</u>
Dividends have	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	46	45	59	23
	(26.6%)	(26%)	(34.1%)	(13.3%)

Summary Statistics

Mean = 1.91 S.D. = 0.835 Std error = 0.07 Z score = 1.27

Chi Square Statistic = 15.46

There is slightly more support for earnings per share variable than for dividends. However, this result is not highly significant. These two factors appear to have a similar level of importance to individual investors (although the E.P.S. is slightly more important). The Chi Square analysis is significant at the 0.001 level, indicating that the responses were not random.

Question 16: Comparing Company risk to imputation credits

	<u>More Influence</u>	<u>Same Influence</u>	<u>less Influence</u>	<u>Uncertain</u>
Company Risk has	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	100	11	21	41
	(57.8%)	(6.4%)	(12.1%)	(23.7%)

Summary Statistics

Mean = 2.6 S.D. = 0.75 Std error = 0.07 Z score = 9.17

Chi Square Statistic = 110.07

Significant support exists for the proposition that risk is more influential than imputation credits when individual investor's analyse companies. The Z score is significant at the 0.01 level as 58% of the respondents indicated that this factor was more influential. The very high Chi Square statistic indicates that the respondents' responses are not random. However, the number of individuals who are uncertain is moderately large.

Question 17: Comparing the Price Earnings ratio to dividends.

	<u>More Influence</u>	<u>Same Influence</u>	<u>less Influence</u>		<u>Uncertain</u>
The P/E Ratio has	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	than dividends	<input type="checkbox"/>
	72 (41.6%)	40 (23.1%)	25 (14.5%)		36 (20.8%)

Summary Statistics

Mean = 2.34 S.D. = 0.77 Std error = 0.07 Z score = 5.2

Chi Square statistic = 28.5

There is significant support for the proposition that the P/E ratio has more influence over the value of the shares than dividends as this result is significant at the 0.01 level. Again, a moderately high proportion of the respondents are uncertain about the relationship between the two variables but like the other questions, a very high Chi Square statistic resulted from this analysis.

Question 18: Comparing the Earnings per Share to company risk.

	<u>More Influence</u>	<u>Same Influence</u>	<u>less Influence</u>		<u>Uncertain</u>
The EPS has	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	than risk	<input type="checkbox"/>
	39 (22.5%)	31 (17.9%)	68 (39.3%)		35 (20.3%)

Summary Statistics

Mean = 1.79 S.D. = 0.86 Std error = 0.07 Z score = -2.9

Chi Square Statistic = 19.48

Although there is a reasonable spread of responses (as also indicated by the slightly lower Chi Square statistic), there is significant support available (at the 0.01 level) for risk being a more important factor than EPS.

Question 19: Comparing Imputation credits and dividends.

	<u>More Influence</u>	<u>Same Influence</u>	<u>less Influence</u>		<u>Uncertain</u>
Imputation Credits have	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	than dividends	<input type="checkbox"/>
	51 (29.5%)	40 (23.1%)	42 (24.3%)		40 (23.1%)

Summary Statistics

Mean = 1.93 S.D. = 0.84 Std error = 0.07 Z score = -0.9

Chi Square Statistic = 2.05

Dividends and imputation credits have a similar influence over the value of the share, as the Z score obtained is not significant. Also, a significant proportion of the respondents are unsure about the relationship between these two factors. However, the statistic causing the greatest level of concern is the very low Chi Square score resulting from the analysis ($p = 0.5616$) which suggests that the responses for this question were either random answers, or indicated that a genuine indifference between dividends and imputation credits exists.

Question 20: Comparing the Price Earnings Ratio to Imputation Credits.

	<u>More Influence</u>	<u>Same Influence</u>	<u>less Influence</u>		<u>Uncertain</u>
The P/E Ratio has	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	than I. C's	<input type="checkbox"/>
	69 (39.9%)	16 (9.2%)	30 (17.3%)		58 (33.5%)

Summary Statistics

Mean = 2.34 S.D. = 0.87 Std error 0.08 Z score = 4.19

Chi Square Statistic = 40.34

There is significant support for the proposition that the P/E ratio is more important than imputation credits when an individual investor analyses a company. Again a high proportion (approximately a third) of the respondents are unsure of the comparative influence of these two variables. The high Chi Square statistic indicates no particular problem with the pattern of responses.

Question 21: Comparing the P/E ratio to company risk

	<u>More Influence</u>	<u>Same Influence</u>	<u>less Influence</u>	<u>Uncertain</u>
The P/E Ratio has	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	37	33	61	42
	(21.4%)	(19.1%)	(35.3%)	(24.3%)

Summary Statistics

Mean = 1.82 S.D. = .85 Std error = .07 Z score -2.5

Chi Square Statistic = 10.28

Again a reasonable dispersion of results occurs, as the Chi Square statistic is significantly high enough to indicate that the responses are not random ($p = 0.016$). The respondents indicate that risk is a more influential factor than the P/E ratio when analysing shares. This result is significant at the 0.05 level (just misses out on the 0.01 level).

Question 22: Comparing dividends to company risk.

	<u>More Influence</u>	<u>Same Influence</u>	<u>less Influence</u>	<u>Uncertain</u>
Dividends have	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	24	27	87	35
	(13.9%)	(15.6%)	(50.3%)	(20.2%)

Summary Statistics

Mean = 1.54 S.D. = .77 St error = .07 Z score = -6.9

Chi square Statistic = 62.95

Significant support exists for the proposition that company risk is more influential than dividends. This result is significant at the 0.01 level and the Chi Square statistic is very high.

Question 23: Comparing Imputation Credits to the Earnings Per Share factor.

	<u>More Influence</u>	<u>Same Influence</u>	<u>less Influence</u>		<u>Uncertain</u>
I. C's have	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	than EPS	<input type="checkbox"/>
	28	24	62		59
	(16.2%)	(13.9%)	(35.8%)		(34.1%)

Summary Statistics

Mean = 1.7 S.D. = .84 Std error = .08 Z score = -3.8
 Chi square statistic = 25.13

The EPS factor has more influence than imputation credits. Although this result is significant at the 0.01 level, what is evident is the large number of respondents who are unsure about the relationship between the two variables. Again, the Chi Square statistic is high enough to indicate that the responses were not random.

Summary

In terms of the hypothesis being tested, the results follow the expected direction. Dividends were not a very highly rated factor in this particular analysis. This was not very surprising as several authors, such as Hickman and Petry (1990) stated that dividend based valuation models are not as accurate as earnings based models. However, this results contrasts Baker and Haslem (1974), and Campbell (1990) whom both reported that dividends rated very highly in both their studies.

Therefore, when an individual investor is analysing shares:

- Dividends are nearly as important as Earnings Per Share (the result showed that they had slightly less influence, but not a significant one).

- The P/E ratio is much more important than dividends.
- Dividends have a very similar influence to imputation credits. Given that dividends must be paid for Imputation Credits to come into existence, this similarity in the ranking's may not be surprising (more respondents rated imputation credits as more important than dividends (9 more)).
- Dividends are clearly subordinate to risk. Risk was significantly more influential than dividends to an individual investor.

Overall Rankings.

Somewhat surprisingly, risk was the most important variable in this analysis. This result is consistent with Good (1989) who reports that risk can be a very important factor, possibly overwhelming the significance of earnings and dividends. However, this result is inconsistent with several other studies of the information requirements of private investors. Hines (1981) states that the highest ranking factor in her analysis was the expected growth in earnings per share. In each question which analysed the relationship between risk and each of the other variables, risk received significantly more support than any other.

The second most important factor appears to be the P/E ratio (although the available literature suggests it should have ranked first). This may highlight a difference between practitioners and private investors as Pari, Carvell and Sullivan (1989) report that this factor is very popular among security analysts, possibly indicating that private investors and practitioners apply very different techniques to analyse shares. It rates far higher than dividends or imputation credits and should rate ahead of earnings (as the P/E ratio incorporates E.P.S.) while only falling subordinate to Risk.

The third most important factor is the EPS ratio, which ranks only marginally ahead of dividends, but significantly ahead of imputation credits. This factor should have

received a similar response to risk, but this result indicates that individual investors are relatively risk averse.

Dividends and Imputation credits receive a relatively similar ranking². Imputation credits rank slightly ahead of dividends in the direct comparison, but dividends receive a higher rating compared to company risk (14% compared to 12%) and EPS (27% compared to 16%) than imputation credits.

One significant conclusion is that questions involving imputation credits receive a higher level of uncertain responses in this investigation (higher than any other factor). When this was analysed, the results indicated that the questions involving imputation credits had a significantly higher level ($p = 0.001$) of uncertainty than the other questions.

Conclusion:

Dividends do affect the value of the share. Question 1 of the survey proves that individual shareholders believe that dividends affect the value of a share.

However, section four indicates that dividends have little influence over the value of a share, as was expected.

When reviewing the comments that the respondents made about other factors which could influence share prices, the most apparent pattern is the high level of significance that macro-economic factors achieve compared to those which are firm specific. This question had two parts; the first allowed the respondent to summarise some factors which may influence the price of a share. Sixty Seven respondents (39%) outlined one or more influential factor. The next step was to indicate whether this factor(s) had more influence over the value of a share than dividends. Of the 55 respondents who answered this next section, 48 (87%) of them stated that these factors had more influence than

²The relationship between Imputation Credits and Dividends (and the Investors age) is analysed further in Section 5.

dividends. This again highlights the minimal influence that dividends appear to have on share prices.

The factors that the respondents indicated as important were:

- the company's management (their proven record and reputation) was a very important factor (16 respondents),
- the firm's earnings potential (16 respondents),
- world markets (14 respondents),
- the firm's industry (6 respondents),
- interest rates (11 respondents),
- the economy as a whole (16 respondents).

Some of the comments were:

Change in sector of economy which most affects shares,

Political events, fluctuations in the commodities markets,

Demand for the product, management and directors reputations, industrial relations,

Competition, world markets, economy, directors profile, management,

Market trend and perceived future profitability,

Rumours,

Future potential of company in relation to product being manufactured or sold,

Risk, nta³, history, price,

The respondents indicated that these factors were more important than dividends. This evidence is consistent with that previously found as it indicates that some private investors take a wide variety of information into account when they invest in companies, whereas others only rely on a limited range of information.

Conclusion: The hypothesis is accepted as correct. Individual shareholders believe that dividends do influence the value of a share. However, dividends do not have a significant influence over the price of a share.

³Net Tangible Assets.

Hypothesis 2: Private investors prefer dividend income to possible income from capital gains.

Questions 2 and 3 investigate this hypothesis. Question 2 determines whether individuals would rather obtain income from capital gains or from dividend income. Question 3 investigates whether these two forms of income are viewed as being of the same risk.

Preference for Income

Question 2: It is better to generate income from capital gains on shares than by dividends.

Strongly <u>Agree</u>	<u>Agree</u>	<u>Uncertain</u>	<u>Disagree</u>	Strongly <u>Disagree</u>
26(15%)	71(41%)	37(21.4%)	35(20.2%)	4(2.3%)

<u>Summary Statistics</u>			
Mean = 3.47	S.D. = 1.051	Std error = 0.08	Z score = 5.8
Chi Square Statistic = 67.66		Skew = -0.34	Kurtosis = 2.2

Approximately 56% of respondents agreed with this particular proposition. The Z score obtained is significant at the 0.01 level and the Chi Square statistic is highly significant, indicating a definite pattern in the responses. The measure of skew indicates that the mode level of responses is higher than the mean, indicating a high level of agreement.

Although this result does not support the available evidence on individual investors' income preference (such as Shefrin and Statman (1984)), given the New Zealand environment the result is not surprising. Investors may prefer capital gains rather than dividends for a variety of reasons, such as; they could make larger absolute gains and the tax advantage of capital gains over dividends (unimputed) is an important factor, especially for those on the pension.⁴ Therefore, the majority of investors prefer to generate income from capital gains rather than dividends.

⁴Especially those over 60 make up a large proportion of the respondents.

Relative Riskiness of Dividends and Capital Gains

Question 3: Dividends are a less risky form of income than capital gains.

Strongly <u>Agree</u>	<u>Agree</u>	<u>Uncertain</u>	<u>Disagree</u>	Strongly <u>Disagree</u>
25(15%)	98(56.6%)	37(21.4%)	12(6.9%)	1(.6%)

<u>Summary Statistics</u>			
Mean = 3.78	S.D. = 0.80	Std error = 0.06	Z score = 12.8
Chi Square Statistic = 166.39	Skew = -.66	Kurtosis = 3.49	

The majority of the respondents believe that dividends are a safer form of income than capital gains (71.6% agreed with the proposition). The Z score is significant at the 0.01 level and the Chi Square statistic is highly significant. The measure of skew result shows that the results contain a negative skew, as the mode level of responses is at a higher level of agreement than the mean indicates.

This does not support Miller and Modigliani's view that dividend income and capital gains are perfect substitutes. The majority of respondents preferred to receive income from capital gains, but indicated that dividends were a safer form of income. This finding is consistent with Lintner's (1956) argument that dividends are a safer form of income than capital gains.

Conclusion: Although investors believe that dividends are a safer form of income, they prefer to receive income from capital gains. Therefore the evidence available is insufficient to accept the second hypothesis.

Hypothesis 3: Private Investors believe that an increase in dividends signals an expected increase in company profits.

Section 2 from the survey was used to analyse this hypothesis. Each question presented the respondent with a reason why dividends may increase and they could indicate whether they agreed or disagreed with the reason. The results are as follows:

Question 4: A dividend increase occurs when managers predict that profits will increase.

Strongly <u>Agree</u>	<u>Agree</u>	<u>Uncertain</u>	<u>Disagree</u>	Strongly <u>Disagree</u>
20(11.6%)	95(54.9%)	23(13.3%)	33(19.1%)	2(1.2%)

Summary Statistics

Mean = 3.57	S.D. = 0.97	Std error = 0.07	Z score = 7.77
Chi Square Statistic = 146.28	Skew = -0.63	Kurtosis = 2.49	

The respondents agree with the proposition that an expected increase in profits will cause a dividend increase (66.5% agreed). The Z score and Chi Square statistic are both highly significant. The high measure of skew indicates that the mode level of agreement was higher than the mean level of agreement.

Question 5: A dividend increase is due to the company having excess cash.

Strongly <u>Agree</u>	<u>Agree</u>	<u>Uncertain</u>	<u>Disagree</u>	Strongly <u>Disagree</u>
11(6.4%)	91(52.6%)	41(23.7%)	29(16.8%)	1(.6%)

Summary Statistics

Mean = 3.49	S.D. = 0.87	Std error = 0.07	Z score = 7.31
Chi Square Statistic = 142.75	Skew = -0.54	Kurtosis = 2.49	

The respondents agree with the proposition that excess liquidity can cause a dividend increase. This obtains a similar level of agreement to the first factor, but slightly lower, as indicated by the lower mean and proportion of respondents agreeing with the proposition (59%). The resulting Z score is highly significant as is the Chi Square

statistic. Again the results contain a negative skew, indicating that a higher mode level of agreement.

Question 6: A dividend increase is an attempt to increase the company's share price.

Strongly <u>Agree</u> 3(1.7%)	<u>Agree</u> 47(26.2%)	<u>Uncertain</u> 51(29.5%)	<u>Disagree</u> 67(38.7%)	Strongly <u>Disagree</u> 5(2.9%)
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<u>Summary Statistics</u>			
Mean = 2.86	S.D. = 0.92	Std Error = 0.07	Z score = -2
Chi Square Statistic = 96.74	Skew = 0.18	Kurtosis = 2.00	

The responders disagree (slightly) with the proposition that a dividend increase is an attempt to increase the share price of a company (41.6% of the respondents disagreed while only 27.9% of the respondents agreed). Although many of the respondents were uncertain, the Z score is significant at the 5% level. The Chi Square Statistic is highly significant while the measure of skewness indicates that the results are slightly positively skewed.

Question 7: A company will increase its dividend if it has no immediate investment prospects requiring cash.

Strongly <u>Agree</u> 4(2.3%)	<u>Agree</u> 63(36.4%)	<u>Uncertain</u> 45(26.1%)	<u>Disagree</u> 56(32.4)	Strongly <u>Disagree</u> 5(2.9%)
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<u>Summary Statistics</u>			
Mean = 3.03	S.D. = 0.95	Std. Error = 0.07	Z score 0.4
Chi Square Statistic = 97.06	Skew = -0.09	Kurtosis = 1.88	

On the whole, the respondents are uncertain whether a company would increase its dividends if it had no immediate investment opportunities available. There is a reasonable spread of responses to the question (as 38.7% agreed with the proposition while 35.3% disagreed with it) and the Z score obtained is insignificant. The high Chi Square statistic indicates that the participants' responses indicated uncertainty, and their

responses were not random for this question. This is also consistent with the very low Skew results achieved.

Question 8: The dividend is being increased to a level preferred by its shareholders.

Strongly <u>Agree</u> 3(1.7%)	<u>Agree</u> 60(34.7%)	<u>Uncertain</u> 39(22.5%)	<u>Disagree</u> 70(40.5%)	Strongly <u>Disagree</u> 1(.6%)
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Summary Statistics

Mean = 2.96	S.D. = 0.93	Std error = 0.07	Z score -0.5
Chi Square Statistic = 116.91	Skew = 0.16	Kurtosis = 1.58	

Again a reasonable spread of responses exists for this question, as 36% of the respondents agreed with it and 41.5% disagreed with it (the Chi Squares statistic indicates that they are not random). The low skew test result indicates that the responses were symmetrical. The Z score obtained is insignificant. Therefore, the respondents are uncertain about the existence of a clientele motive for a dividend increase.

Summary

Of the variables analysed here, it appears that the most important reasons for a dividend increase is either because of an expected profit increase or a cash surplus.

Of the other variables: the respondents did not agree with the proposition that managers' would increase the dividend in order to increase the share price. Finally they were uncertain as to whether a shortage of investment opportunities or an attempt to attract a new clientele of investors would cause dividends to increase.

Therefore, the variables ranked as follows:

Table 4.1 Ranking of Dividend Increase Factors

Factors likely to cause a dividend increase.	Mean	Rank
Future predicted increase in profits	3.57	1 ⁵
Excess Cash	3.49	2 ⁶
No immediate investment prospects	3.03	3
Level preferred by shareholders	2.96	4
Attempt to increase share price	2.86	5

The first two variables received very similar responses which were not significantly different from each other (using parametric statistical techniques). Therefore individual shareholders believe that the most likely reason for a dividend increase (out of the factors analysed) is expected increase in future profits or excess cash at the company.

These results vary to those found by Partington (1989). The primary determinant of a dividend change in his study was profitability, but from this stage on, the results appear different. In his study, share price maintenance was the second highest ranking factor, while the liquidity position of the firm ranked after this (however the respondents still considered it important). Investor preferences rated highly (although it did not investigate the clientele argument) while the tax position of investors ranked lowest (considered unimportant). The Asset expansion (or investment prospects) ranked below investor preferences.

Therefore, different perceptions exist between those who set dividends (managers) and those who receive dividends (investors) about the factors which influence. Most other research which focuses on dividend changes and its causes has used managerial survey's. This makes it difficult to compare these results to the available literature, as although they are analysing the same problem, they use different methods.

⁵Significantly different (at the .001 level) from the last three factors, not the second factor (although the resulting Chi Square test for Goodness of Fit indicates that these two questions do receive a different distribution of answers.

⁶Also rated as significantly different from the last three factors at the same level of significance.

The respondents were invited to make comments at the end of this section about any other variable which they believed may cause a dividend increase. Out of the 173 responders, 54 (31%) made some comment about what they thought might be a major reason for a dividend increase. Of these, the majority (31 of the 54) made some comment that profitability was the key determinant of a dividend increase, whether it be past profits, present profits or future expected profits. The next most important factor, according to these respondents, was to increase shareholders' returns (an idea codified by Lintner). The rest of the comments dealt with a variety of ideas, from one off asset sales, to taxation reasons:

Several of the comments were:

*Increased profits most important,
Company is confident of increased profits,
selling asset and giving one off dividend,
better profits than previous years,
rewarding shareholders for holding shares in the company,
controlling shareholders requiring cash,
Recognition of the need for shareholder loyalty, wish to maintain share price,*

The apparent trend in these responses is consistent with the other results. The majority of those respondents indicated that profitability was the major cause of a dividend increase. There was a fair mix of those respondents who thought that it was due to past profits, current profits and future profits. However, it does appear (in conjunction with the previous evidence) that individual investors believe that future profits are a key determinant when a company sets its dividends.

Conclusion: Tentatively conclude that the hypothesis holds. Although the data does not indicate that an expected profit increase is the primary motivator of a dividend increase, it does indicate that this factor is a highly significant cause of a dividend increase.

Hypothesis 4: Private Investors believe a decrease in the dividend signals bad news (such as a drop in profits) for the company.

Section 3 of the survey was used to investigate this hypothesis. Most of the questions in this section were mirror images (dividend increase became a decrease) of those questions asked in section 2. The results were as follows.

Question 9: A dividend decrease is an attempt to attract different types of investors.

Strongly <u>Agree</u>	<u>Agree</u>	<u>Uncertain</u>	<u>Disagree</u>	Strongly <u>Disagree</u>
0(0%)	14(8.1%)	30(17.3%)	108(62.4%)	21(12.1%)

Summary Statistics

Mean = 2.21	S.D. = 0.76	Std error = 0.06	Z score = -13.6
Chi Square Statistic = 132.23	Skew = 0.74	Kurtosis = 3.48	

The respondents rejected the proposition that a company would decrease its dividends to attract new investors. The majority of respondents disagreed with this statement (nearly 75%) and the Z score is highly significant (at the 1% level). The Chi Square Statistic is also highly significant. Another important indicator is that none of the respondents strongly agree with this proposition while 21 strongly agreed with it. Finally, the results of the skew test shows that the mode level of responses skews to the right, indicating that the respondents had a significant level of disagreement with this proposition.

Question 10: The company has increased investment opportunities for which it needs cash.

Strongly <u>Agree</u>	<u>Agree</u>	<u>Uncertain</u>	<u>Disagree</u>	Strongly <u>Disagree</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4(2.3%)	84(48.6%)	38(22%)	43(24.9%)	4(2.3%)

Summary Statistics

Mean = 3.24	S.D. = 0.94	Std error = 0.07	Z score = 7.31
Chi Square Statistic = 127.03	Skew = -0.48	Kurtosis = 2.06	

There is significant support for the proposition that a company would decrease its dividends if it had an investment opportunity requiring cash. The Z score is significant at the 1% level and just over 50% of the respondents agree with this proposition. The Chi Square statistic is highly significant and the Skew test indicates that the responses skew to the left, towards agreeing with the proposition.

Question 11: The company wishes to reduce debt by using cash from dividends.

Strongly <u>Agree</u> 7(4%)	<u>Agree</u> 95(54.9%)	<u>Uncertain</u> 41(23.7%)	<u>Disagree</u> 30(17.3%)	Strongly <u>Disagree</u> 0(0%)
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Summary Statistics

Mean = 3.46	S.D. = 0.83	Std error = 0.06	Z score = 7.34
Chi Square Statistic = 96.48	Skew = - 0.57	Kurtosis = 2.31	

The responses indicate that there is significant support for this proposition (at the 0.01 level). Nearly 60% of the respondents agreed or strongly agreed with this proposition, and the Chi Square Statistic is highly significant. Another significant factor is that no respondent strongly disagreed to this proposition while 7 strongly agreed with it. The negative skew indicates that the respondents' mode level of agreement was higher than the mean level.

Question 12: A dividend decrease occurs because management believes that profits will decrease.

Strongly <u>Agree</u> 9(5.2%)	<u>Agree</u> 91(52.6%)	<u>Uncertain</u> 38(22%)	<u>Disagree</u> 34(19.7)	Strongly <u>Disagree</u> 1(0.6%)
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Summary Statistics

Mean = 3.42	S.D. = 0.88	Std error = 0.07	Z score = 6.28
Chi Square Statistic = 143.85	Skew = -0.52	Kurtosis = 2.28	

The respondents agreed with the proposition that an expected profit decrease in the future can cause a dividend decrease. This result is significant at the 0.01 level as nearly

60% of the respondents agreed or strongly agreed with this proposition, while only 20% disagreed with it. The Chi Square statistic is highly significant and the measure of skew indicates that the responses are negatively skewed towards agreement.

Question 13: A dividend decrease occurs because the company has insufficient cash to pay dividends.

Strongly <u>Agree</u>	<u>Agree</u>	<u>Uncertain</u>	<u>Disagree</u>	Strongly <u>Disagree</u>
20(11.6%)	107(61.8%)	33(19.1%)	13(7.5%)	0(0%)

Summary Statistics

Mean = 3.79	S.D. = 0.75	Std error = 0.06	Z score = 14
Chi Square Statistic = 130.05	Skew = -0.69	Kurtosis = 2.41	

This factor gained the strongest support out of all the factors in this analysis. Over 74 % of the respondents agreed or strongly agreed with the proposition that insufficient liquidity can cause a dividend decrease. Particularly significant is that no respondents strongly disagreed with this proposition while 20 strongly agreed with it. The result obtained is highly significant (at the 0.01 level) and points to investors believing that a primary reason behind a dividend cut may be insufficient liquidity. The Chi Square statistic is highly significant as is the measure of skew indicates that the mode level of responses is higher than the mean.

Question 14: Managers will decrease dividends to improve its situation in labour negotiations.

Strongly <u>Agree</u>	<u>Agree</u>	<u>Uncertain</u>	<u>Disagree</u>	Strongly <u>Disagree</u>
0(0%)	9(5.2%)	57(33%)	84(48.6%)	23(13.3%)

Summary Statistics

Mean = 2.34	S.D. = 0.74	Std error = 0.06	Z score = -12
Chi Square Statistic = 89.45	Skew = 0.12	Kurtosis = 2.71	

The majority of the respondents (over 60%) disagreed or strongly disagreed with the proposition that managers' will decrease dividends to improve negotiations with labour.

The result is highly significant, as no respondent strongly agreed with this proposition while 23 strongly disagreed with it. The Chi Square statistic is highly significant while the measure of skew does not appear to be so.

Summary

The respondents believe that companies lower their dividends for a variety of reasons, such as an expected profit decrease, but believe it is more likely that they will decrease the dividend payout was because of insufficient liquidity.

The factors ranked as follows:

Table 4.2: Ranking of Dividend Decrease Factors

Factor likely to cause a dividend decrease	Mean	Rank
The company has insufficient cash available	3.79	1 ⁷
The company wishes to reduce debt	3.46	2 ⁸
Profits are expected to decrease	3.42	3
Cash is needed for investing	3.24	4
Improve negotiations with labour	2.34	5
Attract different types of investors	2.21	6

The factor which private investors believe is the most likely cause of a dividend decrease is a shortage of liquidity. The next two highest ranked factors are: that the company wishes to reduce debt or that profits should decrease in the future. The respondents disagreed with the propositions that a company wishing to alter its clientele or improve negotiations with labour would cause a dividend decrease.

⁷This result received the highest ranking, and is significantly different from all other factors analysed in this section at the 0.01 level. The Chi Square test of the Goodness of Fit indicates that the distribution of responses for this question are significantly different from the responses of the other questions.

⁸This factor does not receive statistically significantly different support from the expectation that profits will drop. The Chi Square Goodness of Fit test reveals that these two questions receive a relatively similar distribution of responses.

When comparing these results to Partington (1989) they appear significantly different again, as the highest ranking factor in his study was a decrease in profits. However, the next factor (the reduction of debt) was only marginally important in Partington's study and ranked well behind profitability and liquidity and ahead of investments. These are the significant differences which occur with Partington's study.

When reviewing the comments that the respondents made for this section, it appears that there is a wide distribution of opinion as to why dividends may decrease. 42 of the 173 (24%) respondents made some comment about another reason why dividends may decrease. Of these:

- profits were the major cause (17),
- bad management caused it (7),
- due to takeover defence (3),
- 'good' reasons, such as capital expenditure (7).

Some of the comments were:

Bonus shares issued recently,

Last ditch attempt to avoid insolvency,

Profit growth will slow,

Company wants a stronger bottom line in view of takeover,

Major Capital Expenditure,

Profits already decreased, have already distributed previously set level of profits

Decrease price and buy back own shares

As interest rates fall, the need for high dividends diminishes

Company run by liars,

Incorrect belief by shareholders that dividends aren't important

Decrease in profitability,

Company has taken on too much debt

Corporate strategy, directors spend too much on social occasion,

Conclusion: Tentative rejection of the hypothesis. Private investors believe that the primary motive for a dividend cut is insufficient funds. This result is surprising as research shows that companies are very reluctant to cut dividends, even if they have

insufficient liquidity (as they will attempt to issue further capital or obtain more debt). Further evidence leading this hypothesis to be rejected is that the second highest ranking factor, is not bad news (reducing dividends to enable the company to reduce debt) while the profit motive ranked third.

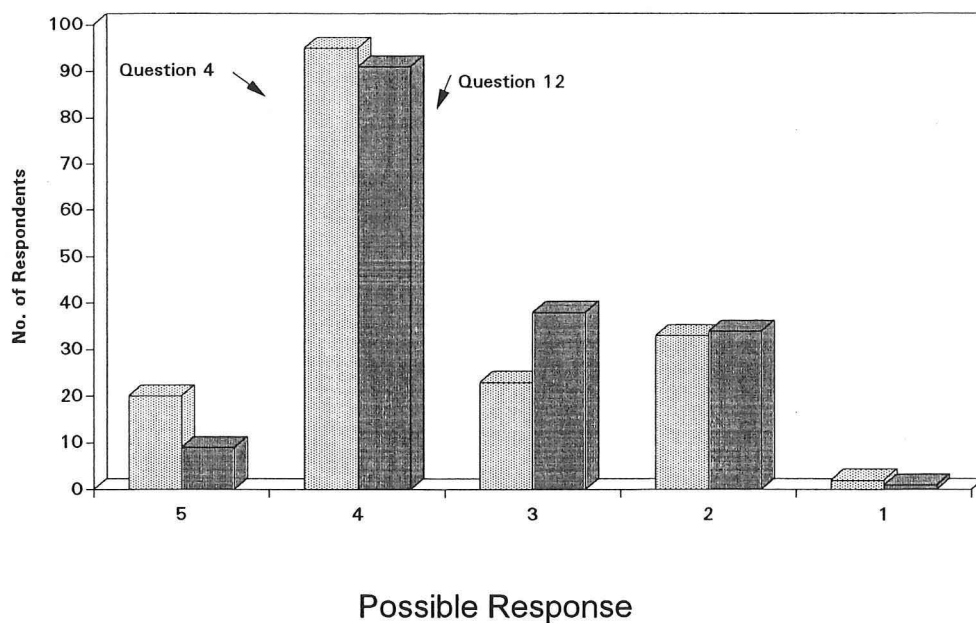
Hypothesis 4a: There exists an inverse relationship between the reasons for a dividend increase and decrease.

This hypothesis investigated the results of the four questions in section 2 having an inverse question (related to a dividend decrease) in section 3. The section compared the distribution of responses for each set of questions to see if the responses were the same. If the distributions are similar (or not statistically different), then it should indicate that individual investors' believe that each factor is just as likely to cause a dividend increase as a decrease. The results are as follows:

Comparing Question 4 to question 12:

Expected changes in profitability rated highly in both sections. It ranked first in section 2 (although not significantly ahead of liquidity) and ranked third in section 3 (although not significantly different from second).

Graph 4.1. Graphical comparison of responses for Question 4 and 12



When graphically comparing the results, a definite similarity between the responses exists, as the majority of the respondents agree with each of the separate propositions. The major difference occurring is that question 4 has a higher level of agreement and question 12 has a higher level of uncertainty.

Chi Square Test: Goodness of Fit

Responses	Agree		Uncertain	Disagree	
Answer	5	4	3	2	1
Question 4 Responses	115		23	35	
Question 12 Responses	100		38	35	
Chi Square Statistic = 11.739					

Although the distribution of answers has a very similar trend, the resulting Chi Square test of the Goodness of Fit indicates that the distribution of responses are different. According to this particular analysis private investors believe that an expected profit increase is slightly more likely to cause the dividends to increase than an expected profit decrease will cause dividends to decrease. This result is consistent with most empirical research showing that managers are more reluctant to cut dividends than they are to increase them.

Comparing Question 5 to Question 13

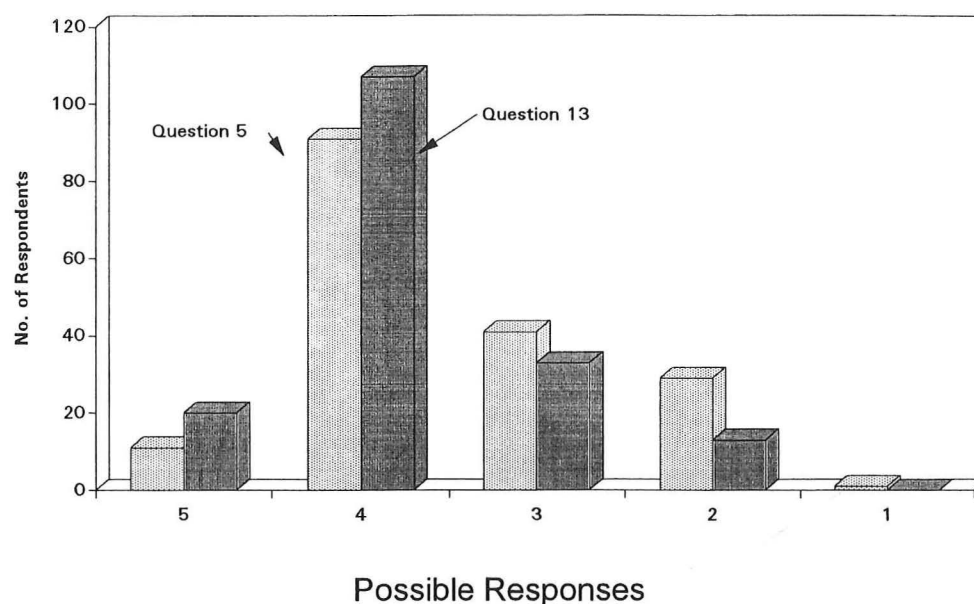
This question analyses whether the level of liquidity available (sufficient or insufficient) at a company affects the level of dividends in the same way. What is evident, from analysing hypotheses 3 and 4, is that liquidity is a very important factor. It was the second highest ranking factor causing a dividend increase⁹ and the highest ranking factor in terms of dividend decreases. However, when comparing a graphical representation of the two sets of data, what is evident is that respondents were more likely to agree to question 13 than to question 5.

Chi Square Test: Goodness of Fit

Responses	Agree		Uncertain		Disagree	
Answer	5	4	3	2	1	
Question 5 Responses	112		41		30	
Question 13 Responses	127		33		13	
Chi Square Statistic = 16.516						

⁹Not significantly different from the highest ranking factor.

Graph 4.2 Graphical comparison of the responses to Questions' 5 and 13



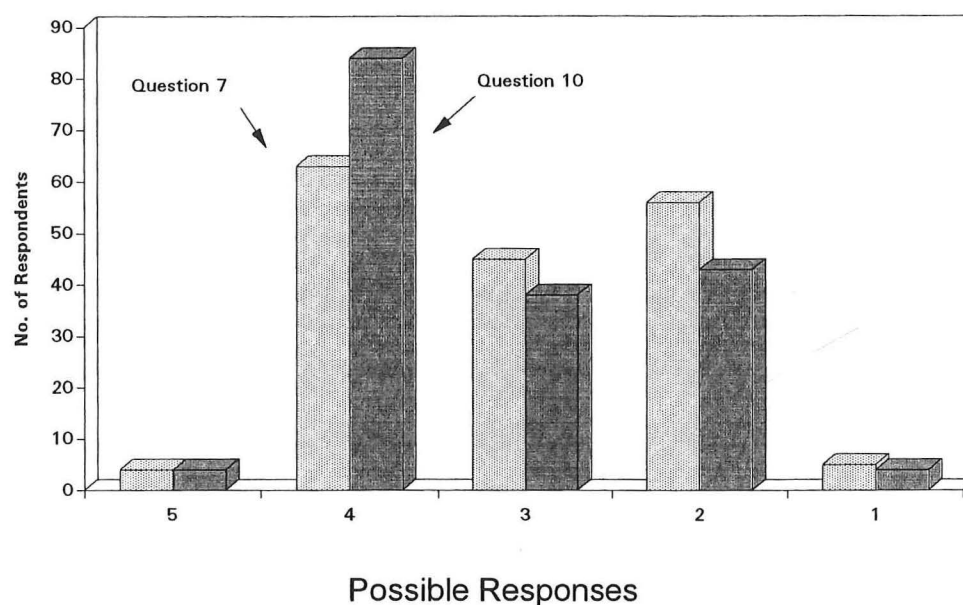
The Chi square tests shows that a significant difference occurs in the distribution of responses between the two questions. Therefore, private investors believe that a company is more likely to decrease dividends when it has insufficient funds than it is to increase dividends when it has excess liquidity. This result makes intuitive sense as a firm with excess cash has more alternatives available (such as investing it, repaying debt etc) than a firm with insufficient funds, which must obtain further financing if it wishes to pay a dividend.

Comparing Question 7 to Question 10

These two questions investigate whether companies change their dividends due to the funding requirements for investments. These propositions received mediocre support in both the analyses of hypothesis 3 and 4. When investigating hypothesis 3, the respondents were very uncertain about its possibility. When analysing hypothesis 4, investors agreed with the proposition that a firm may reduce dividends to free up funds for investing. When compared to the other factors, it was not highly significant (ranking fourth out of six options available). When reviewing the graphical representation of the

results, it appears that the respondents were more likely to disagree with question 7 than question 10 (as was indicated by the mean-variance analysis).

Graph 4.3: Graphical representation of the responses to Question 7 and 10



Chi Square Test: Goodness of Fit

Responses	Agree		Uncertain		Disagree	
Answer	5	4	3	2	1	
Question 7 Responses	67		45		61	
Question 10 Responses	88		38		47	
Chi Square Statistic = 10.884						

The resulting Chi Square analysis revealed that distributions of the two questions are significantly different. Again, as with the other questions analysed, no equal relationship between dividend increases and decreases occurs. Individual investors believe that a company is more likely to reduce dividends to free up funds for investing rather than increase dividends due to a lack of investment opportunities. Again, not unlike the previous results, this makes intuitive sense, as a company with investments needing funds may cut dividends (see Ghosh and Woolridge (1988 and 1989)) whereas a firm with no investments available at the moment has a greater range of options available.

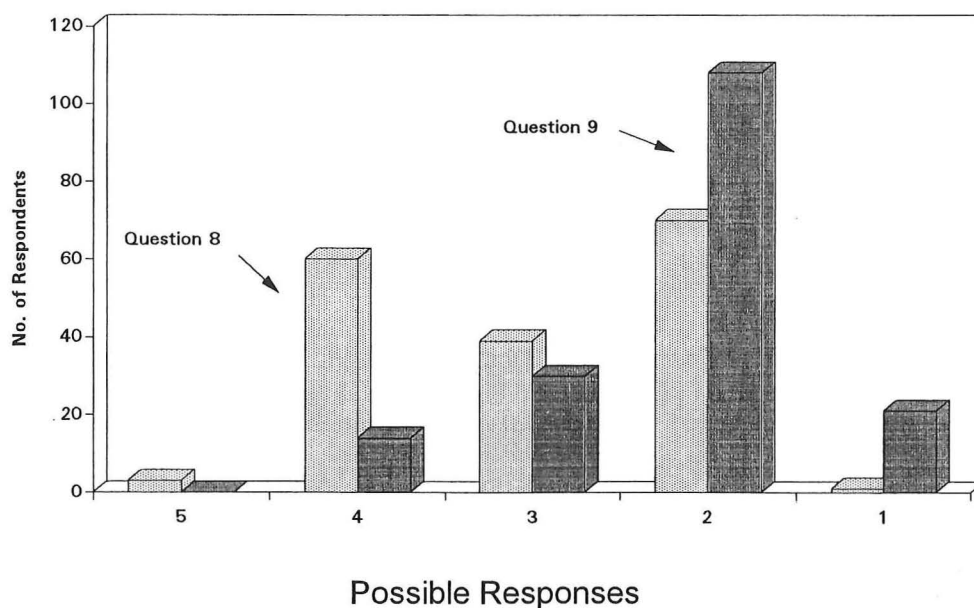
Comparing Question 8 to question 9

Of the sets of questions analysed, these two questions represent the factor most equally likely to cause a dividend increase or a decrease. When reviewing the results of hypothesis 3 and 4, no significant relationship between the two is apparent. In section 2, there was no significant opinion regarding whether a firm would increase its dividend payout to attract new investors. However, in section three, the respondents disagreed with the proposition that the company would cut the dividends to attract investors. This result is even more apparent when reviewing the graphical results of the two questions.

Chi Square Test: Goodness of Fit

Responses	Agree		Uncertain		Disagree	
Answer	5	4	3	2	1	
Question 8 Responses	63		39		71	
Question 9 Responses	14		30		129	
Chi Square Statistic = 80.568						

Graph 4.4: Comparison of the responses to Questions' 8 and 9



The Chi square tests shows that no relationship exists between the distribution for question 8 and 9. Therefore, as with all the other questions, the distributions of answers received when stating the question in reverse, does not match. Private investors believe that a company may increase its dividend to attract a new form of clientele, and that dropping the dividend would not be successful at all. This may indicate that investors have a preference for a higher level of dividends as a drop in the dividends would not attract new investors.

Summary

When reversing the effect that a factor has on dividends, the respondents indicated that it has a different effect on dividend changes. There appears to be no linear relationship between a factor's influence on dividend increases and decreases. It is very difficult to directly compare these results to previous research as few have compared the influence that one factor can have on dividend increases and decreases.

In summary, the results indicate that:

- a) An expected profit increase is more likely to cause dividends to increase than an expected profit decrease will cause dividends to decrease. This is consistent with Partington (1989, Pg 172) whose findings indicate that an increase in profits was slightly more likely to lead to a dividend increase than a profit decrease was likely to lead to a dividend decrease.
- b) Having insufficient liquidity is more likely to cause a dividend decrease than excess liquidity is likely to cause a dividend increase. Again this is consistent with available empirical literature, as a company can issue debt to maintain a dividend while a company with excess cash has more options available. However, when the new Companies Act comes into force, companies will have to meet a solvency test before paying a dividend.

c) A firm is more likely to cut dividends if it needs funds for investment than it is to increase dividends if it has no investment opportunities available. There is little literature available on this particular question. It appears more likely that a company would cut dividends if it needed the funds for an investment, as a company with insufficient investments has other options available. Examples are: repurchasing shares or investing in the short term money market

d) Individual investors believe an increase in dividends is more likely to attract new investors than a decrease in dividends. This result is consistent with the 'Rightists' argument which states that investors prefer higher dividends. Therefore, a company cutting its dividend will not attract many new investors as investors, on aggregate, prefer to receive a higher dividend. This result is inconsistent with the Leftist view who favour setting dividends according to the preferences of rational profit maximising investors.

Conclusion: Hypothesis 4a) is rejected. Private investors indicated that each of these factors affects dividend increases and decreases in different ways. There is significant enough evidence to reject the hypothesis. This result makes intuitive sense and supports some of the more generalised literature available; such as Managers' are far more reluctant to cut dividends than they are to increase them.

Hypothesis 5: There exists among New Zealand Private Shareholders an "age clientele", in which (in contrast to younger shareholders), older shareholders have a preference for shares paying a higher dividend.

To investigate this hypothesis, the analysis compared the responses given to each relevant question (from section one and four of the survey) to the respondents age. This analysis excluded those respondents who did not indicate which age bracket they fell into. This left an effective sample of 169 respondents out of 173 to analyse this hypothesis.

Section 1:

This section investigated the individual investors' preferred income source and whether dividends represented a safer form of income than capital gains.

In the original analysis, the respondents indicated that:

- 1) Dividends do influence the value of a share.
- 2) They prefer to obtain their income from capital gains rather than dividends.
- 3) Dividends are a less risky form of income than capital gains.

This section used a Least Squares regression methodology and Chi Square test to reveal whether there was any relationship between the respondent's age and their response.

When applying the Least Squares methodology to Question one and three, the r squares obtained from the regression analyses were very low, indicating that this factor explained very little of the variance.

The Chi Square test performed for question 1 indicated that some relationship existed between the two ($p = 0.11$), however a significant number of the cells had insufficient data points to make the analysis accurate. Attempts to refine the model by grouping similar categories together were not successful in improving the significance of the result. When testing Question 3, the initial analysis revealed that no significant

relationship existed. The following refinements were not able to induce a higher significance level, indicating again that no relationship occurred between an investor's age and the risk perceptions between dividend and capital gain income.

Therefore, private investors have fairly constant perceptions (throughout the age groupings) of the riskiness of capital gain and dividend income, and whether dividends influence the value of a share.

A similar result appeared in the original analysis of Question 2, as the Least Squares regression analysis revealed little correlation, and the original Chi Square analysis revealed little significant correlation ($p = 0.44$). The model was further refined by grouping the responses into three categories of 'agree', 'uncertain' and 'disagree', (also reducing the number of cells with insufficient data points). The analysis revealed that some relationship existed between an individual's age and income preference ($p = 0.096$).

The next step was to group together age classifications having relatively similar responses to each question. The following table summarises these results.

Chi Square Analysis of the responses from Question two and Age.				
	Responses			
Age	Disagree	Uncertain	Agree	Total
Above 51	28(28%)	19(19%)	54(53%)	101
41 to 50	3(10%)	4(14%)	22(76%)	29
Below 40	7(18%)	13(33%)	19(49%)	39
Chi Square Statistic = 9.719		Degrees of Freedom = 4		
Significance p = 0.045436				

This analysis reveals that older investors (those over 51), compared to younger investors (those below 40), have a higher preference for dividend income than capital gains. They still have a high level of preference for capital gains as 53% of the

respondents still prefer to obtain their income from selling shares, where only 28% prefer to gain their income from dividends. A similar percentage of the younger investors preferred to obtain their income from capital gains (49%), however a smaller percentage preferred dividend income (18%). The other major difference between these two groups is that younger investors are more likely to be uncertain or indifferent between their sources of income (33% of the respondents in the youngest age class compared to 19% of the older investors).

A similar result occurs when analysing those who fall into the middle group (aged 41 to 50). Like the oldest group of investors, their level of uncertainty or indifference is lower (14%) than that of younger investors, but they have a very low preference for dividend income (10%) and a relatively high preference for Capital Gains income (76%).

Finally, a parametric Z score hypothesis test analysed these groupings. The respondents' answers had a value assigned to them, depending on whether they agreed with the proposition (5), were uncertain about the proposition (3) or disagreed with the proposition (1). The strength of their opinion is not being measured in this instance. The following table summarises these results.

Z Score Analysis of the responses to Question 2 and Age.			
Age Groups	Mean	Std. Dev' ¹⁰	Number in Group
Above 51	3.51	1.736	101
41 to 50	4.31	1.339	29
Below 40	3.62	1.532	39

As indicated by the previous analysis, the group having the highest preference for dividend income are those investors aged above 51. However, this result is not statistically different from those aged below 40. The major cause of this is the high rate

¹⁰Standard Deviation.

of 'uncertain' responses by those participants aged below 40 (approximately a third of the respondents). The result obtained for those respondents aged between 41 and 50 is significantly different from both other groups of respondents, indicating a relatively high preference for capital gains, especially when compared to those investors aged over 51.

Therefore, Investors aged between 0 and 40 have relatively homogeneous expectations regarding their income preference. A large proportion of these respondents were unsure as to what their preferred income source is, however, of those who know their preferences, few prefer dividend income over capital gains income.

Investors aged between 41 and 50 age bracket, have lower levels of both uncertainty and dividend income preference. This group is highly focussed on Capital Gains.

The final age classification (of those investors over 51) has a higher preference for dividend income when compared to the other groups, but a large proportion still preferred to obtain income from capital gains.

This result is consistent with most currently available literature on the age clientele effect. Lease, Lewellen and Schlarbaum (1976) found that as the age of the investor increased the aggregate investor placed more emphasis on dividend income. Crocket and Friend (1988) viewed this preference as a rational one as this group is subject to lower taxes (this is not the case in the New Zealand). It appears that the transaction cost argument, and Shefrin and Statman's self control explanation may be more appropriate.

Section 4:

This section used the same methodology to analyse the results. Of this, five of the nine questions showed a significant correlation between the respondents' answers and their age. These questions were; 15, 16, 18, 19 and 21.

Question 15: Preference between Dividends and EPS.

In the original analysis EPS was slightly more important than dividends to the respondents. When analysing the results for the comparison between the investor's age and these two factors, a relationship is evident. The following table shows the result of the Chi Square Analysis.

Chi Square Analysis of the Preference for dividends or EPS vs Age.					
Responses					
Age	Uncertain	EPS	Indifferent	Dividends	Total
Above 41	9(7%)	43(33%)	38(29%)	40(31%)	130
0 to 40	10(26%)	15(38%)	9(23%)	5(13%)	39
Chi Square Statistic 13.64			Degrees of Freedom = 3		
Significance p = 0.0034					

Several conclusions can be made from this data: Firstly, younger investors (here classified as those below 40) have a higher level of uncertainty (7% of older investors compared to 26% of younger investors). Secondly, and more significantly, dividends were a much more important factor for older investors than for younger investors (31% of older investors compared to 13% of younger investors). A higher proportion of older investors were indifferent between the two (29% compared to 23%) while a higher proportion of younger investors indicated that the EPS factor was more important than dividends (38% to 33%).

These results, as with those found previously, are consistent with the Age Clientele Hypothesis. Older investors had a higher level of preference for dividends than younger investors. However, younger investors preferred Earnings Per Share, which has more influence than dividends over the value of a share.¹¹

¹¹As also indicated by the findings from hypothesis 1.

Question 16: Preference between Company Risk and Imputation Credits

When analysing hypothesis one, Company risk was the factor which the respondents rated as most important when analysing companies. The previous analysis located significantly stronger support for Company risk than imputation credits. The following table details these findings.

Chi Square Analysis of the Preference for Company Risk vs Imputation Credits					
Responses					
Age	Uncertain	I.C. ¹²	Indifferent	Risk	Total
Above 51	20(20%)	17(17%)	9(9%)	55(54%)	101
31 to 50	9(21%)	2(5%)	0(0%)	32(74%)	39
Below 30	10(40%)	2(8%)	1(4%)	12(48%)	25
Chi Square Statistic 14.56			Degrees of Freedom = 6		
Significance p = 0.0239					

Again significant trends result from this analysis. The results are not as reliable as the previous results as several cells have expected values below five (3 of the 12).

Again the most obvious conclusion is that younger investors have a higher level of uncertainty, as 40% of the investors aged below 30 were uncertain while approximately 20% of those who were older than 31 were uncertain. The other tentative finding is that older investors have a higher preference for imputation credits. This finding is consistent with the previous results since older investors have a higher preference for dividends, they should have a higher preference for Imputation Credits.¹³

¹²Imputation credits (I.C.)

¹³It may also indicate that dividends are more important to this group as they have a higher awareness of Imputation Credits, given that younger investors remain uncertain about them.

Question 18: Preference between EPS and Company Risk

As previously mentioned, company risk was the factor which individual investors rated to be the most important factor. In the original analysis of this question, the combined respondents indicated that Risk was the more important factor. The resulting Chi Square Analysis (as shown in the following table) reveals a relationship between the investor's age and preferences.

Chi Square Analysis of the Preference for EPS vs Company Risk					
Responses					
Age	Uncertain	Risk	Indifferent	EPS	Total
Above 31	25(17%)	62(43%)	20(14%)	37(26%)	144
Below 30	8(32%)	5(20%)	10(40%)	2(8%)	25
Chi Square Statistic 16.265			Degrees of Freedom = 3		
Significance p = 0.001					

Consistent with the previous findings, younger investors (those aged below 30) are more uncertain than older investors (in this instance, those aged above 31). The other significant factor is that younger investors have a higher propensity to be indifferent between either risk or EPS, while older investors have a higher tendency to regard risk (and secondly EPS) as more important.

Question 19: Preference for Imputation Credits vs. Dividends.

In the original analysis, these two factors had statistically similar responses. The majority of the investors indicated that they were indifferent between these two factors when analysing companies. The following table highlights the results achieved when comparing the respondent's age to their responses for this question.

Chi Square Analysis of the Preference for Imputation Credits vs Dividends

Age	Responses				Total
	Uncertain	dividend	Indifferent	I.C.	
Above 61	13(18%)	20(27%)	20(27%)	20(27%)	73
51 to 60	4(14%)	6(22%)	4(14%)	14(50%)	28
41 to 50	5(17%)	12(42%)	9(31%)	3(10%)	25
Below 40	16(41%)	13(33%)	6(16%)	4(10%)	39

Chi Square Statistic = 26.829

Degrees of Freedom = 9

Significance $p = 0.001$

Consistent with all previous results, the youngest class of investors had the highest level of uncertainty (41% compared to an average level of 17%). Apart from this, there is no constant trend in the responses. The oldest class of investors is remarkably consistent across the array of preferences in that they are indifferent between dividends and imputation credits when they analyse a company. The next oldest age classification (those aged between 51 and 60) has a higher preference for imputation credits than dividends, which may indicate that this group attempts to minimise taxable income rather than maximise the overall size of their income. The next two age classes (all those aged below 50) consider dividends more important than imputation credits.

These results offer no significant evidence for or against the Age Clientele argument. The oldest class of investors still maintain a comparatively high preference for dividend income (despite the tax disadvantage for this income preference). The high level of preference for dividends recorded by the younger investors may be due to their not having a high level of understanding of imputation credits.

Question 21: Preference for P/E Ratio vs Company Risk

This was the last factor for which a relationship existed between the individual's age and pattern of response. As previously shown, Company Risk was the most important

factor out of these two to individual investors. The following table summarises the results of this analysis.

Chi Square Analysis of the Preference for P/E ratio vs Company Risk					
Responses					
Age	Uncertain	Risk	Indifferent	P/E	Total
Above 51	20(20%)	37(37%)	15(15%)	29(29%)	101 ¹⁴
31 to 50	9(21%)	20(47%)	9(21%)	5(12%)	43
Below 30	10(40%)	4(16%)	9(36%)	2(8%)	25
Chi Square Statistic = 18.973			Degrees of Freedom = 6		
Significance p = 0.0042					

As before, younger investors have a higher level of uncertainty than older investors. Apart from this conclusion, no consistent trend is apparent from these results.

Older investors appear to either find risk or the P/E ratio the most important factor (with risk being the most significant factor) but they do not have a high level of indifference between the two. Investors aged between 31 and 50 find that risk is the more important factor while the youngest class of investors has a higher level of indifference between the two, given its high levels of uncertainty.

Summary:

Of this analysis, the most apparent result is that younger investors (most typically defined as those below 30) have a lower level of understanding regarding all these factors investigated here. If all the other sections used this methodology to test for a correlation between age and the pattern of responses, a similar trend of result would probably appear. This finding undermines the homogeneity of investors' assumption as younger investors are not as aware of the importance of these factors (as much as older investors).

¹⁴Due to rounding, the percentages only add to 99%.

This makes intuitive sense, as younger investors may not have the same level of experience. However, when considering that younger investors have a higher preference for capital gains income, this is very surprising. As an investor must have a higher level of knowledge about the market to make capital gains rather than to receive an acceptable level of dividend income (given that most firms' attempt to maintain a stable dividend). Unfortunately there is little empirical literature available on this phenomenon in New Zealand.

The other major consistent finding that this investigation has located is that older investors, in comparison to younger investors, have a higher preference for dividends than capital gains. This does not mean to say that older investors prefer to fund consumption from dividends but that a greater proportion of older investors prefer dividends. Questions 2, 15 (and possibly Question 19) provide evidence supporting this. What is more important, no significant evidence from this analysis can be used falsify this proposition.

Another consistent finding was that older investors (in this case defined as those aged above 51) had a higher preference for Imputation Credits than younger investors. However a possible explanation for the disparity of preferences between these two groups is that this factor had a significantly lower level of understanding by younger investors. Therefore, if this group has a very low level of understanding regarding this factor, then they are not likely to regard it as an important factor. As Hamson and Ziegler (1990), and Wills (1991) report, certain classes of shareholders (they did not classify the groups) have not made full use of the credits.

Conclusion: Tentative acceptance of the hypothesis. This analysis provides definite proof that older investors have a statistically higher preference for dividend income than younger investors.

Summary and Conclusions

Summary and Conclusions

This study investigated dividend policy in New Zealand and what it means to individual investors. Four specific areas were analysed (six hypotheses). They were:

- Do investors believe that dividends influence the value of a share,
- Whether an individual investor prefers to gain their income from shares or capital gains,
- Do investors believe dividend changes can convey signals about a company and its performance,
- Does an age clientele effect exists.

To achieve the goal of this research, a mail survey of 280 individual shareholders in eight companies registered in New Zealand (35 per company) took place. The survey received a total of 173 useable replies and from this it was possible to investigate these proposed areas and learn about private shareholders.

The results of the investigations into the six hypotheses were:

Hypothesis 1: Accepted

Private investors indicated that dividends do affect the value of a share but when the relative preference for the five factors (section four of the survey) was investigated, dividends did not rate very highly.

Hypothesis 2: Rejected

On aggregate, individual investors prefer to obtain income from capital gains on shares rather than dividends. However, they do not view capital gain income and dividends as perfect substitutes as dividends represented a safer form of income.

Hypothesis 3: Accepted

An expected profit increase ranked as the highest indicator of a dividend increase. The other highly ranking factor was excess cash. Therefore, private investors believe that a dividend increase does signal positive news about a company's future. When investigating the open ended responses to this section, the respondents indicated that profits (past, present and future) are a key determinant of dividends.

Hypothesis 4: Rejected

Private Investors indicated that the highest ranked reason for a dividend cut is insufficient funds. A future expected decrease in profits rated highly and many respondents stated it was very important, but this factor rated similarly to the debt reduction motive (a motive which is not bad news). A popular theme when reviewing the open ended questions was that a dividend decrease results from bad management.

Hypothesis 4a: Rejected

Dividend decreases and increases appear to occur because of different reasons as each factor in the analysis had a different influence on dividend increases than on decreases.

Hypothesis 5: Accepted

This analysis provided evidence consistent with the age clientele hypothesis. As investors get older, they have a higher preference for dividend income. The reverse is true, as younger investors have a higher relative preference for capital gains than dividends.

Other Conclusions:

As a result of the study, numerous observations and conclusions were made about private investors. Where appropriate, these were tested to see whether a certain trend or trait was significant. These other findings are as follows:

a) The survey collected two forms of demographic information. The first piece of information concerned the age of the investors while the second concerned how large their portfolio was (number of companies).

When analysing the age of private investors, it became apparent that the majority of private investors are older than 50. Over 60% of the respondents indicated that they were older than 51, 25% were aged between 31 to 50 while only 15% of the respondents were younger than 30. Previously, it has been very difficult to locate any information about the demographics of New Zealand investors. Since some information is now available about investors' age classifications and preferences, companies may be able to cater for these when setting dividend policy.

When investigating the average size of each respondent's portfolio, it was apparent that a large proportion of shareholders (46%) own shares in between 1 and 5 companies. This indicates that most private investors have limited diversification against market risk. The mode level of companies owned shares in was 2 while the average level was about 8.¹ Only 23% of the respondents indicated that they owned shares in more than 11 companies.

b) Private investors consider risk the most important factor when they are investigating companies. This factor ranked significantly ahead of the P/E ratio, and is very surprising given the majority of shareholders do not own a well diversified portfolio.

c) Private investors have a low level of understanding regarding imputation credits (compared to other factors) which was significantly higher than all the other factors analysed in this research. However, older investors have a higher preference for dividends with full imputation credits (as evidenced by their comparatively high preference for this factor) and this group had a higher level of knowledge about this factor.

¹ Although as previously mentioned, this is heavily influenced by outliers.

d) Another variable that private investors find important is the quality and reputation of a company's management. Although this thesis did not include this in its analysis (as no available literature advocated this factor), the respondents indicated that this was important when they analysed companies.

e) When analysing the open-ended results for the section dealing with dividend increases, a significant reason as to why managers' may increase dividends was to increase the actual return to the shareholder. Several respondents indicated that a dividend increase may be an attempt to increase the shareholders' return and reward them for owning shares in the company.

f) A highly significant finding is that private investors appear to prefer higher dividends to lower dividends. The respondents indicated that decreasing dividends would not attract new investors whereas increasing the dividend might attract new investors. Therefore a company paying a higher dividend is more attractive than a company paying a lower dividend (given that the two companies are comparable).

g) Younger investors (in this investigation, those aged below 30) do not have the same level of knowledge about the sharemarket as older investors. When comparing the responses between these two age groups, the most apparent trend was that younger investors had a significantly higher level of uncertainty than older investors.

Optimal dividend Theory:

One of the original goals of this research was to investigate the three main optimal dividend policies proposed and to determine whether the evidence collected would support any of the three theories. Although this research did not test these three theories directly (apart from the first section), the evidence provided throughout the analysis revealed information about the preferences of private investors and its relationship to optimal dividend policy. The evidence gathered by this research is most consistent with

the Traditional Rightists theory of dividend policy. Their argument that higher dividends are preferred by investors gains significant evidence. Such as:

- Investors indicated that they prefer higher dividends to lower dividends, which is consistent with this theory.
- Private investors indicated that dividends affect the value of a share. This is inconsistent with Miller and Modigliani's (1961) argument that dividend policy does not affect a firm's value.
- Dividends and capital gains are not substitutes for each other as the respondents believed that dividends and capital gains were not of the same risk class. This is inconsistent with Miller and Modigliani's argument that capital gains and dividends are substitutes.
- Despite the tax disadvantage of preferring dividends, older investors have a relatively high preference for dividend income. This is inconsistent with the tax based clientele argument which argues setting dividend policy according to the tax laws.
- Private investors believe that managers do smooth dividends to a certain extent as several respondents indicated that past, present and future profits are taken into account when setting dividends.
- Several respondents indicated that part of the reason for a dividend increase is to reward investors. This is consistent with Lintner (1956, Pg 100) who commented that *"Most officers and directors regarded their stockholders as having a proprietary interest in earnings, and many urged the stockholders special interest in getting earnings in dividends"*.

Limitations of the study

A very important step when conducting research of this type is to recognise the limitations involved. Identification of these will help future research overcome these problems and produce more accurate and reliable results. Several limitations existed in this research:

a) The first problem was the shortage of available literature to gain guidance from. This area of finance has attracted little attention from researchers and this left little for this research to follow on from. The problem was most severe when designing the survey, as little literature uses surveys' to research individual shareholders. Therefore, the questionnaire design used in the survey is exploratory.

b) The Company Register at Registry Managers used to obtain the listing of potential respondents for the survey was not accurate for some companies. This may be due to poor recording keeping by those involved or individual investors not informing the Register when their addresses changed. This led to some surveys being returned unanswered as the participant no longer lived at the address supplied.²

c) Another significant limitation of using surveys to gain information is the problem of non-response bias. When analysing this, the first step was to compare the demographics of responders and non responders. However, this survey only collected two forms of demographic data and the analysis of early and late responders revealed no significant differences between the two.

The next step was to analyse the differences in responses between these two groups. This analysis indicated that for several of the questions, later respondents had a higher level of uncertainty than earlier respondents. This problem did not appear to be significant due to the high response rate the survey achieved.

²The worst example of this was that one survey was returned with the comment that the respondent had not lived at that address for eight years.

d) Another limitation of the study was the method used to deal with partial non-response (where a respondent left out a question). The methodology used to overcome this problem did not follow the format suggested by the available literature (mainly due to the ordinal qualities that the data displays). Fortunately there were not many instances where this occurred so it should not be a major problem.

e) A further limitation with this survey (which is endemic to all surveys) is that the questions in the survey may have meant different things to each respondent. The survey was extensively pre-tested, so this should not have been a significant problem.

f) The questionnaire did not include the question comparing Earnings Per Share to the Price Earnings ratio. This should not present a major problem as the respondents logically should prefer the P/E ratio as it already includes the E.P.S. figure in its calculation.

g) The statistical methodologies employed by this research may not be appropriate. Due to survey design (using Likert Scale questions) a limited array of statistical methodologies are available to analyse the data. Although many previous studies use parametric statistics to analyse the data, this may not be allowable, as statistical literature doubts whether data obtained from a Likert scale has interval qualities. However, the analysis only used parametric statistics where they appeared applicable.

h) When investigating the clientele hypothesis, it became very apparent that a very small number of the respondents were 'younger' (aged below 30). This result was not due to a response bias but it made the analysis of the age clientele effect unreliable due to the small number of young investors. If this problem is to be overcome by future research, a larger number of young investors will have to be included in the sample.

Hopefully these limitations are not significant enough to invalidate the results of this research as every effort was made to minimise these problems.

Further Research:

In order to overcome the limitations of this research and to add further evidence to that found here, further research should be conducted. Some of the elements which would improve this research are:

Due to small number of young investors responding to the survey, increasing the size of the survey is a necessary option. This will have the advantage of increasing the number of young investors who respond to the survey, enabling a more accurate assessment of the clientele effect to take place.

Some attempt should be made to use a ranking test for the information signalling hypothesis. Although this methodology has drawbacks it helps determine which factors are most likely to lead to a dividend change.

Several new apparently influential factors have become known, especially the quality of management variable.

The relative information requirements of investors by age. This research has been able to determine that younger investors are more uncertain than older investors and that they do have different preferences to older investors. Therefore, these two sections of private investors must obtain their information in different ways.

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Appendices

Appendix 1:
The Survey Questionnaire

Nationwide Survey of Private Shareholders

Section 1:

To what extent do you agree or disagree with these statements (✓)

A) Dividends affect the value of a share.

Strongly
Agree
☐

Agree
☐

Uncertain
☐

Disagree
☐

Strongly
Disagree
☐

B) Income from dividends is better than from selling shares.

Strongly
Agree
☐

Agree
☐

Uncertain
☐

Disagree
☐

Strongly
Disagree
☐

C) Dividends are a less risky form of income than capital gains.

Strongly
Agree
☐

Agree
☐

Uncertain
☐

Disagree
☐

Strongly
Disagree
☐

Section 2:

When a company increases its dividends, it means that (✓)

A) Managers predict that profits will increase.

Strongly
Agree
☐

Agree
☐

Uncertain
☐

Disagree
☐

Strongly
Disagree
☐

B) The company has excess cash.

Strongly
Agree
☐

Agree
☐

Uncertain
☐

Disagree
☐

Strongly
Disagree
☐

C) It is an attempt to increase the company's share price.

Strongly
Agree
☐

Agree
☐

Uncertain
☐

Disagree
☐

Strongly
Disagree
☐

Section 2: continued:

When a company **increases** its dividends, it means that (✓)

D) The company has no immediate investment prospects it needs cash for.

Strongly <u>Agree</u>	<u>Agree</u>	<u>Uncertain</u>	<u>Disagree</u>	Strongly <u>Disagree</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

E) The dividend is being increased to a level preferred by its shareholders.

Strongly <u>Agree</u>	<u>Agree</u>	<u>Uncertain</u>	<u>Disagree</u>	Strongly <u>Disagree</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Are there any other reasons for an increase in dividends? Please state. _____

Section 3:

If the company **decreases** its dividend, it means that (✓)

A) Management is trying to attract different types of investors.

Strongly <u>Agree</u>	<u>Agree</u>	<u>Uncertain</u>	<u>Disagree</u>	Strongly <u>Disagree</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B) The company has increased investment opportunities for which it needs cash.

Strongly <u>Agree</u>	<u>Agree</u>	<u>Uncertain</u>	<u>Disagree</u>	Strongly <u>Disagree</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

C) The company wishes to reduce debt using cash from dividends.

Strongly <u>Agree</u>	<u>Agree</u>	<u>Uncertain</u>	<u>Disagree</u>	Strongly <u>Disagree</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

D) Management believes that profits will decrease.

Strongly <u>Agree</u>	<u>Agree</u>	<u>Uncertain</u>	<u>Disagree</u>	Strongly <u>Disagree</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

E) The company has insufficient cash to pay dividends.

Strongly <u>Agree</u>	<u>Agree</u>	<u>Uncertain</u>	<u>Disagree</u>	Strongly <u>Disagree</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

F) The company is trying to improve its situation in labour negotiations.

Strongly <u>Agree</u>	<u>Agree</u>	<u>Uncertain</u>	<u>Disagree</u>	Strongly <u>Disagree</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Are there any other reasons for a decrease in dividends? Please state. _____

Section 4:

Share Valuation.

Definitions:

Dividends = The dividend paid by each firm.

EPS = The Earnings Per Share. Equals the company's profit divided by the number of shares issued.

P/E Ratio = The Price to Earnings ratio. Equals the Price of the share divided by its earnings (per share).

Risk = How risky the company is seen to be, for example: how much debt it holds, how much its income fluctuates, or the likelihood that it will go out of business.

Imputation Credits = whether the companies dividends are fully imputed.

Here are two columns of factors which can be involved with valuing shares. In your own opinion (when valuing shares for yourself), does the factor in column (X) have **more** influence, the **same** influence or **less** influence over the price of the share than the factor in column Y (✓).

	Column <u>X</u>	Column <u>Y</u>	<u>More</u> <u>Influence</u>	<u>Same</u> <u>Influence</u>	<u>less</u> <u>Influence</u>	<u>Uncertain</u>
A)	Dividends	EPS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B)	Company Risk	Imputation Credits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C)	P/E Ratio	Dividends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D)	EPS	Company Risk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Column <u>X</u>	Column <u>Y</u>	<u>More</u> <u>Influence</u>	<u>Same</u> <u>Influence</u>	<u>less</u> <u>Influence</u>	<u>Uncertain</u>
E) Imputation Credits	Dividends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F) P/E Ratio	Imputation Credits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G) P/E Ratio	Company risk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H) Dividends	Company risk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I) Imputation Credits	EPS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Are there any other factors which have an effect on the value of shares? Please state _____

Do they have more influence than dividends over the value of the share? _____

—

Section 5:

Approximately how many companies do you own shares in presently? ____

If zero (0), have you ever owned shares previously (✓) Yes ☐ No ☐

What age Category do you fit into ? (✓)

0 - 20

☐

21 - 30

☐

31 - 40

☐

41 - 50

☐

51 - 60

☐

60+

☐

Thank you for your assistance in completing this questionnaire.

Appendix 2:
The follow up letters

3 August 1993

«Name»

«Address1»

«Address2»

«Address3»

Dear Shareholder

Dividend Policy: Is it important?

As part of my university studies, I am researching New Zealand shareholders, regarding what they think dividends say about a company and how important dividends are to them.

Your Participation in this study would be greatly appreciated.

You and all the other respondents have been chosen at random from the company register so that a cross section of private investors in New Zealand has been chosen. While aggregate results will be distributed, your personal opinions and views will remain confidential.

Could you please help me by completing a series of approximately 25 questions. This, I hope, should take you no longer than 10 minutes. Even if you own shares but are not personally responsible for managing your share portfolio, your views and opinions are important to my research so I hope that you can complete the survey.

Thank you very much for your time.

Yours sincerely,

Craig Palmer

18 August 1993

«Name»
«Address1»
«Address2»
«Address3»

Dear Shareholder,

Recently you were sent a copy of my survey on **Dividend Policy and Share Valuation**. I am writing to you now to reaffirm my interest in receiving a reply from you.

The New Zealand Sharemarket has been particularly busy recently, much of which is due to private shareholders (such as yourselves) trading more actively. Your reply can greatly assist in making my results more relevant.

Could you please complete the questionnaire, even if you are unsure of the answers, as your responses are very important to me.

If you are unable to locate your copy of the survey, I will send out an extra copy to you next week to enable you to complete it — I hope that you can.

Yours sincerely

Craig Palmer

27 August 1993

«Name»

«Address1»

«Address2»

«Address3»

Dear Shareholder,

Recently you were sent a copy of my survey on **Dividend Policy and Share Valuation**. I am writing to you in the hope that you will be able to complete it and return it to me. In case you have mislaid the original copy of the survey, I have enclosed a further copy and a prepaid reply envelope so that you will be able to reply.

Could you please complete the questionnaire, even if you are unsure of the answers. Your responses are very important to me, as the higher the response rate which I get (now just under 50%), the more reliable will be my results.

If you were wondering, the number on the back of the questionnaire is intended to identify each respondent, but only so that I can cross your name off the list if a reply is received when I send out further follow up letters.

Thank you very much for your participation.

Yours sincerely

Craig Palmer

Appendix 3:
Response To Each Question

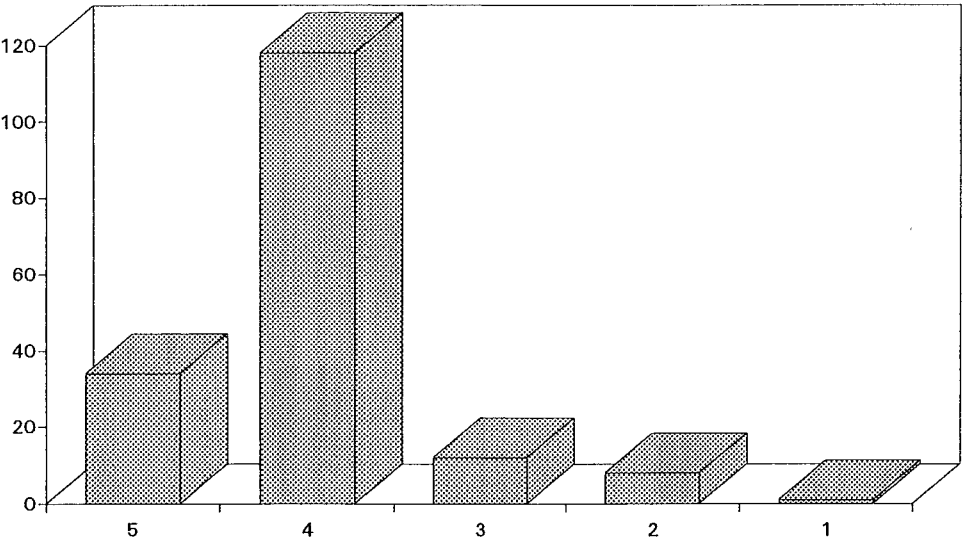
Responses

Key

5	Strongly Agree
4	Agree
3	Uncertain
2	Disagree
1	Strong Disagree

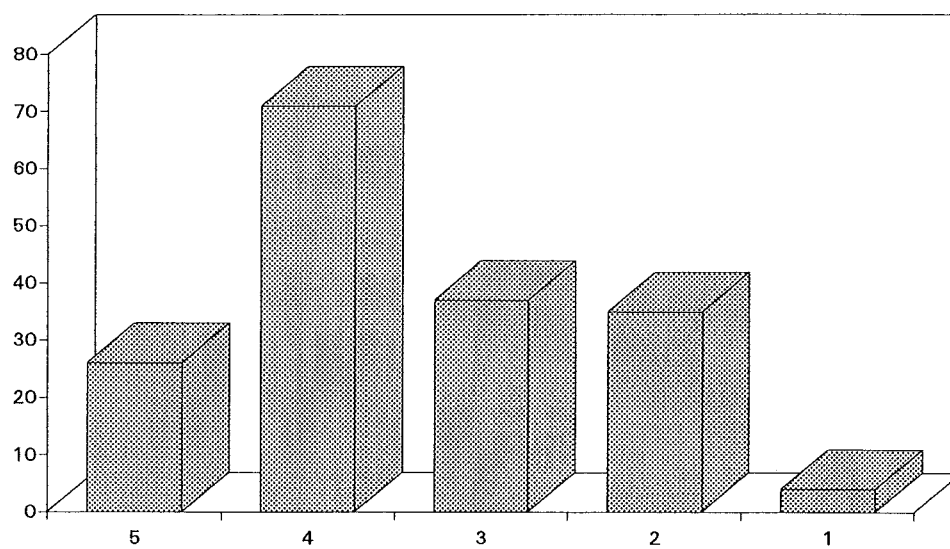
Question 1

5	4	3	2	1
34	118	12	8	1



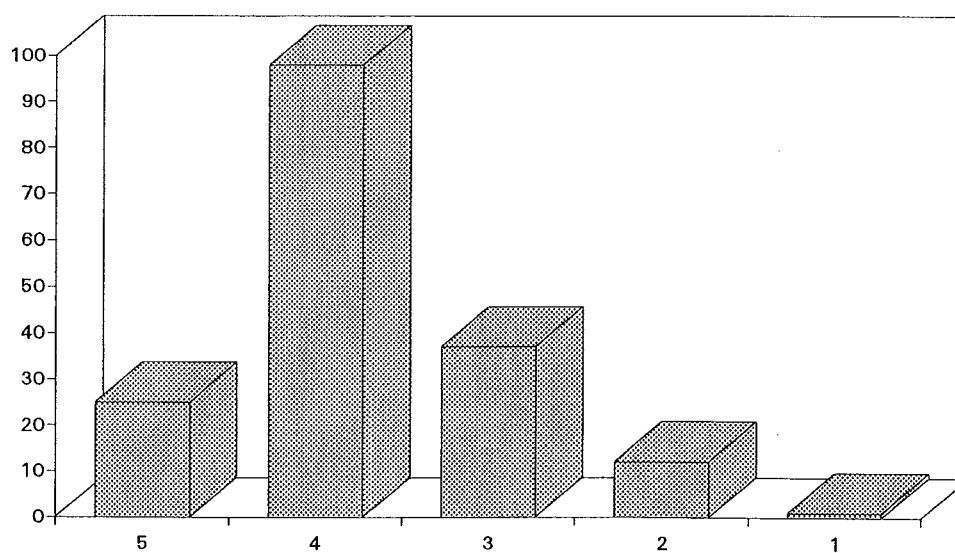
Question 2

5	4	3	2	1
26	71	37	35	4



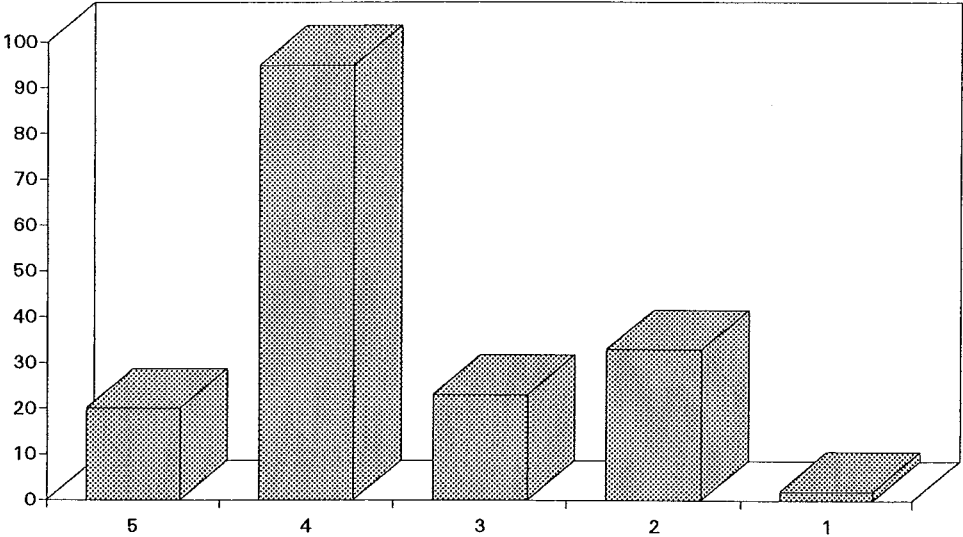
Question 3

5	4	3	2	1
25	98	37	12	1



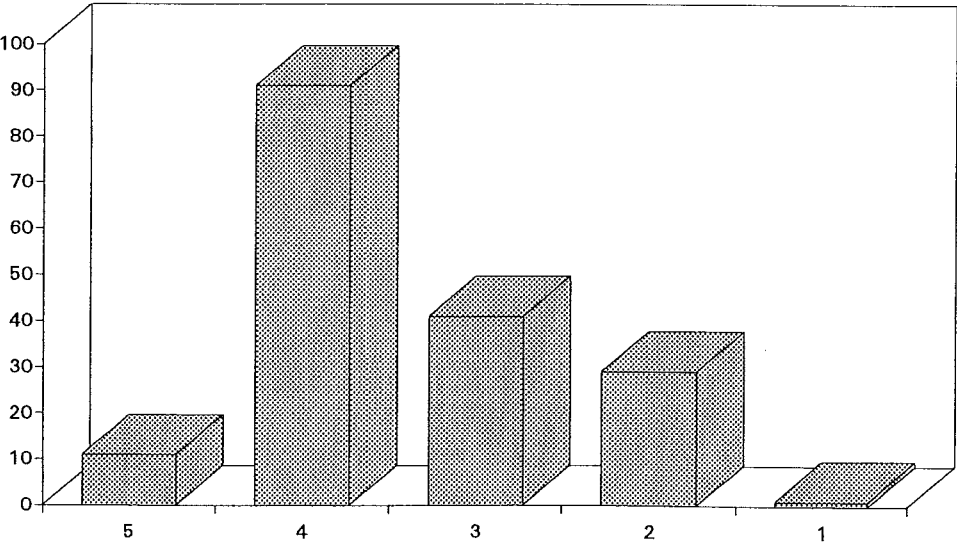
Question 4

5	4	3	2	1
20	95	23	33	2



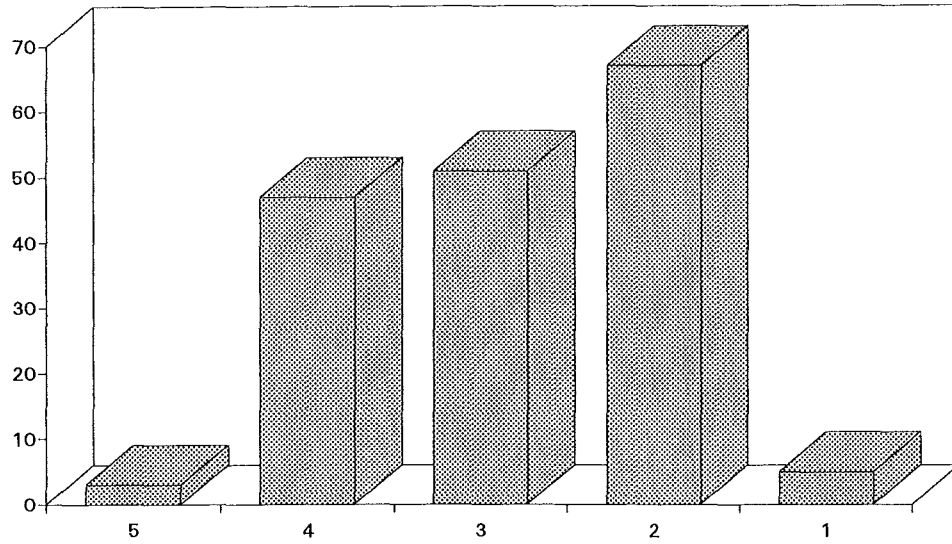
Question 5

5	4	3	2	1
11	91	41	29	1



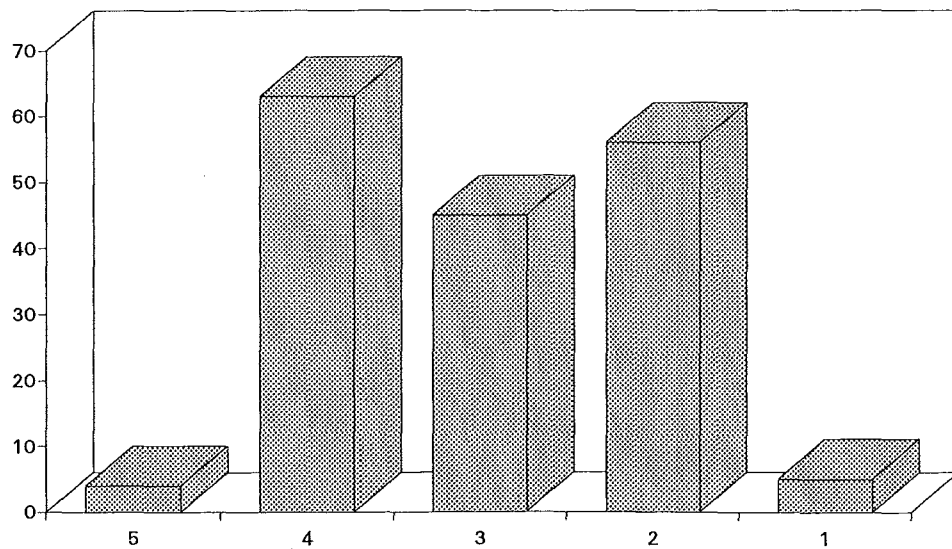
Question 6

5	4	3	2	1
3	47	51	67	5



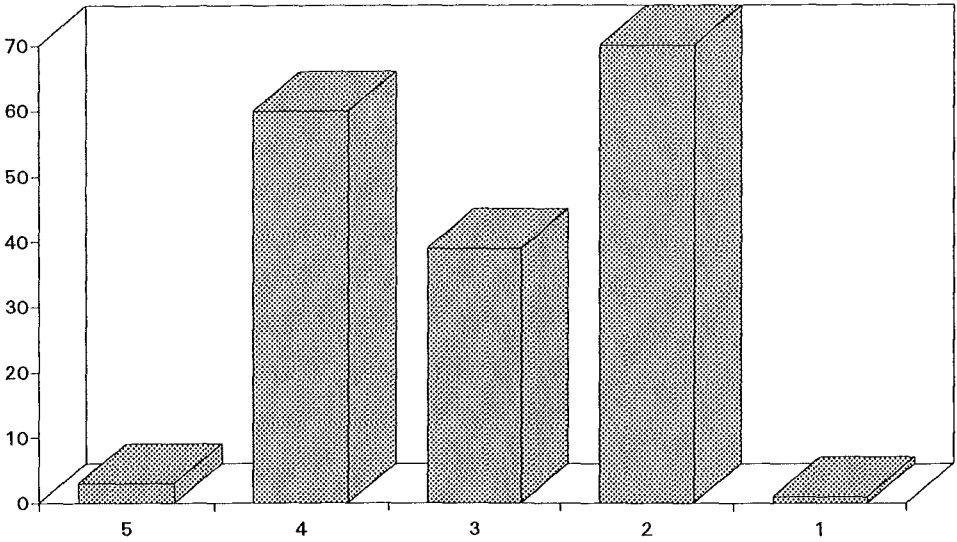
Question 7

5	4	3	2	1
4	63	45	56	5



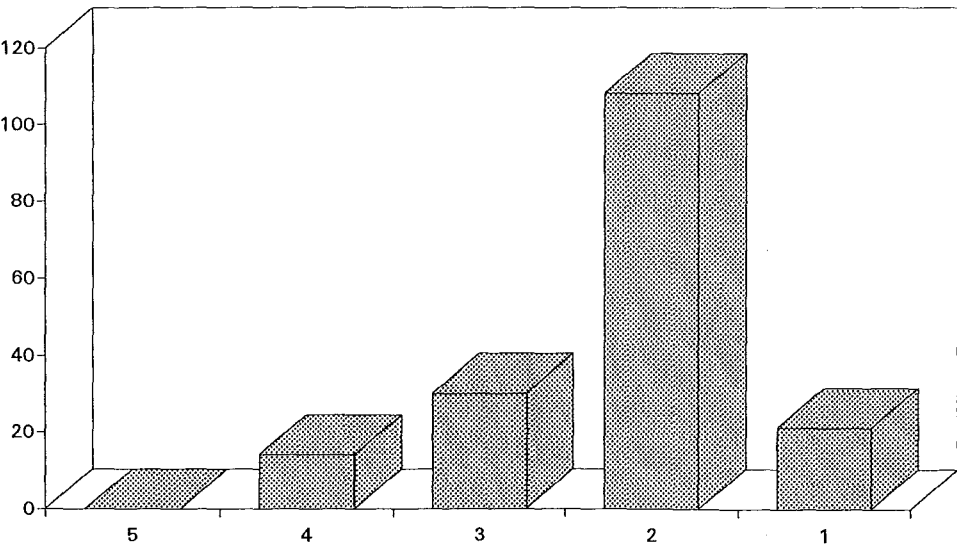
Question 8

5	4	3	2	1
3	60	39	70	1



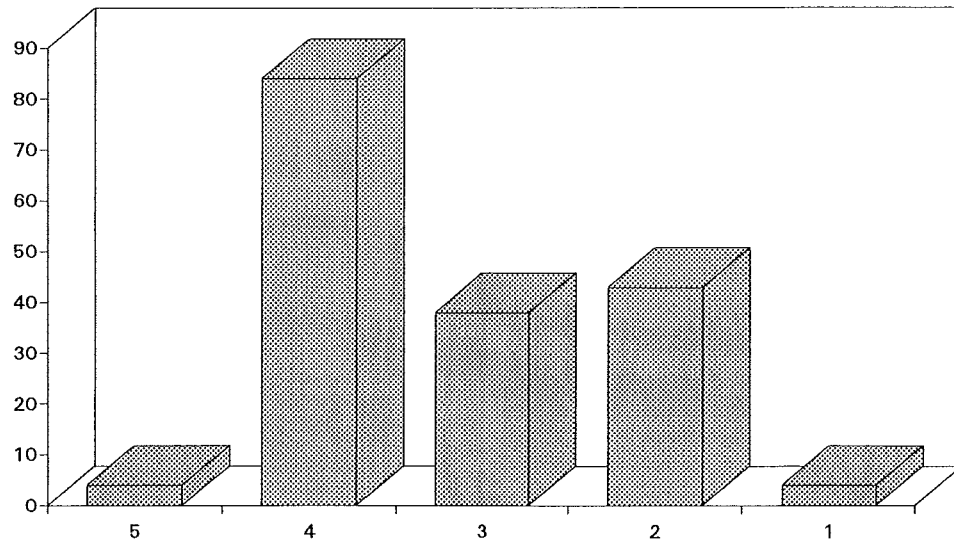
Question 9

5	4	3	2	1
0	14	30	108	21



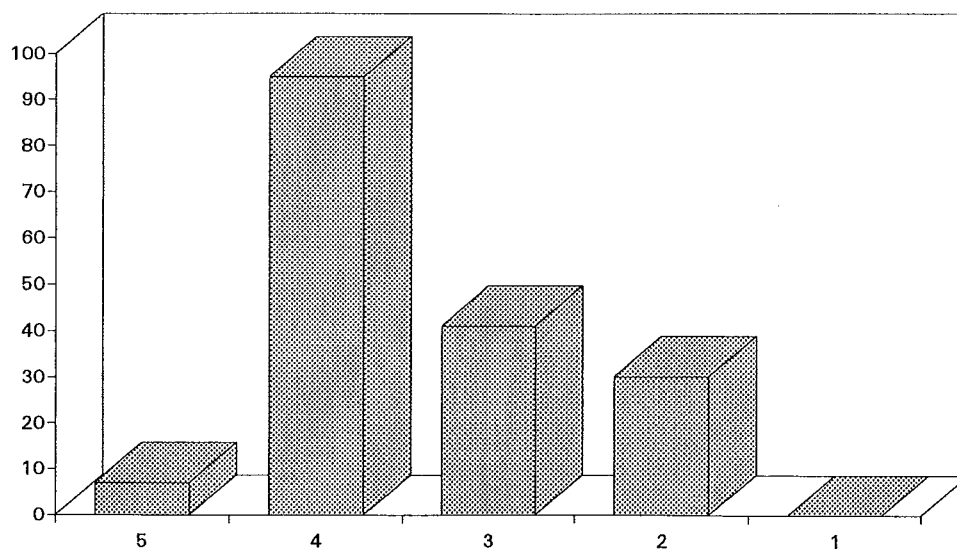
Question 10

5	4	3	2	1
4	84	38	43	4



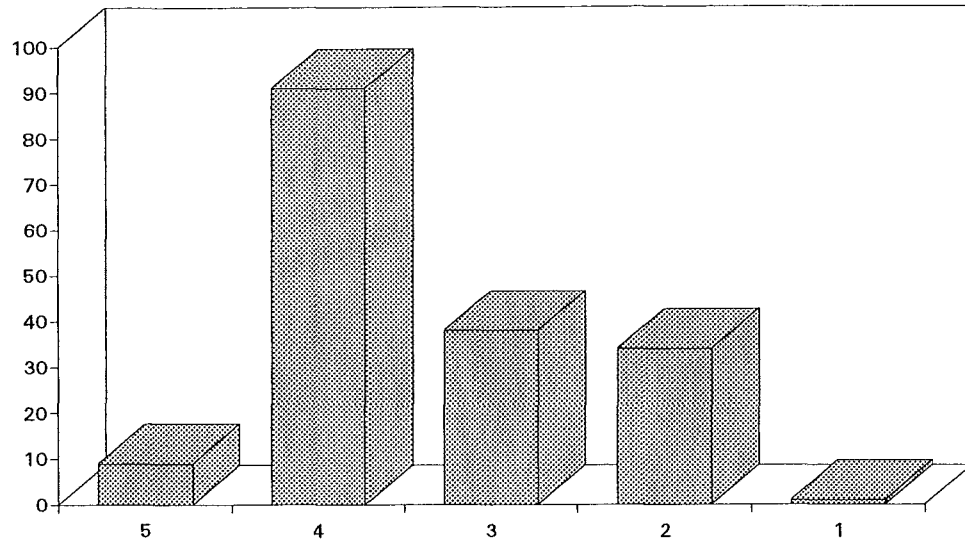
Question 11

5	4	3	2	1
7	95	41	30	0



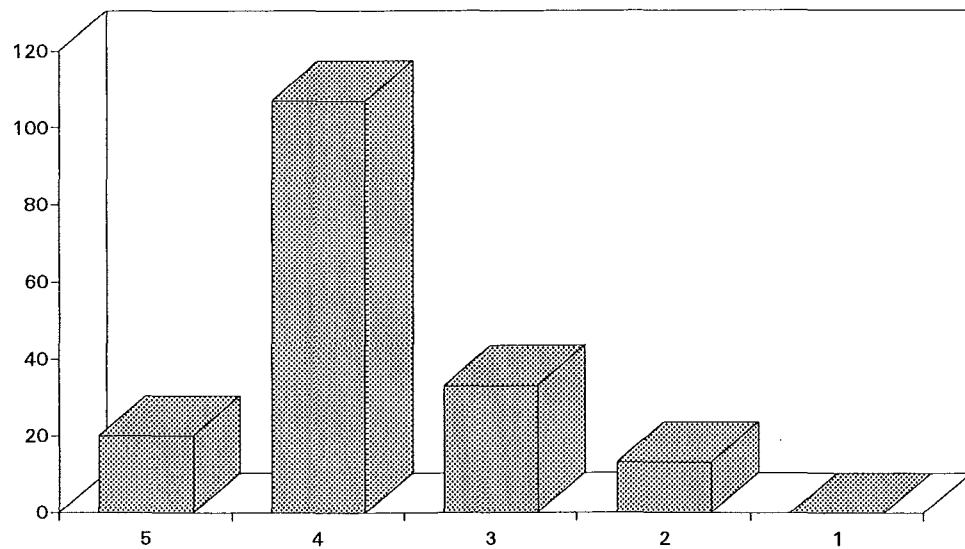
Question 12

5	4	3	2	1
9	91	38	34	1



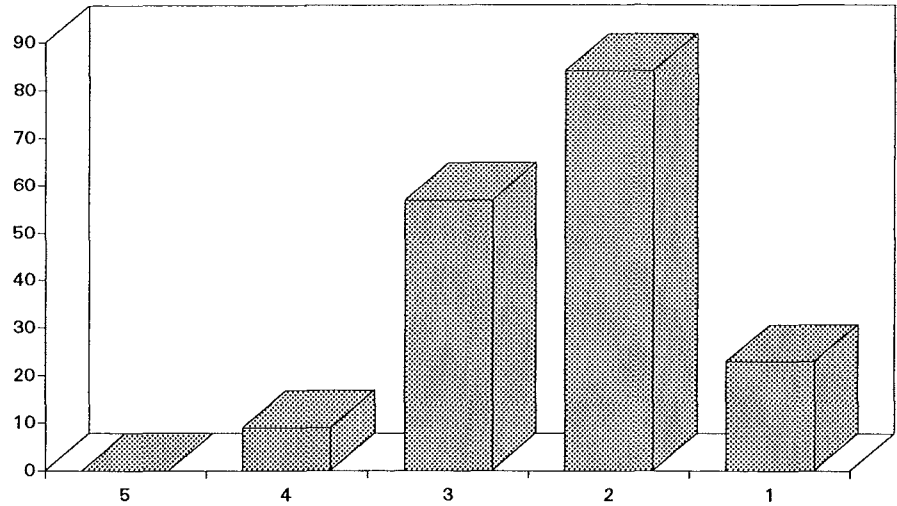
Question 13

5	4	3	2	1
20	107	33	13	0



Question 14

5	4	3	2	1
0	9	57	84	23

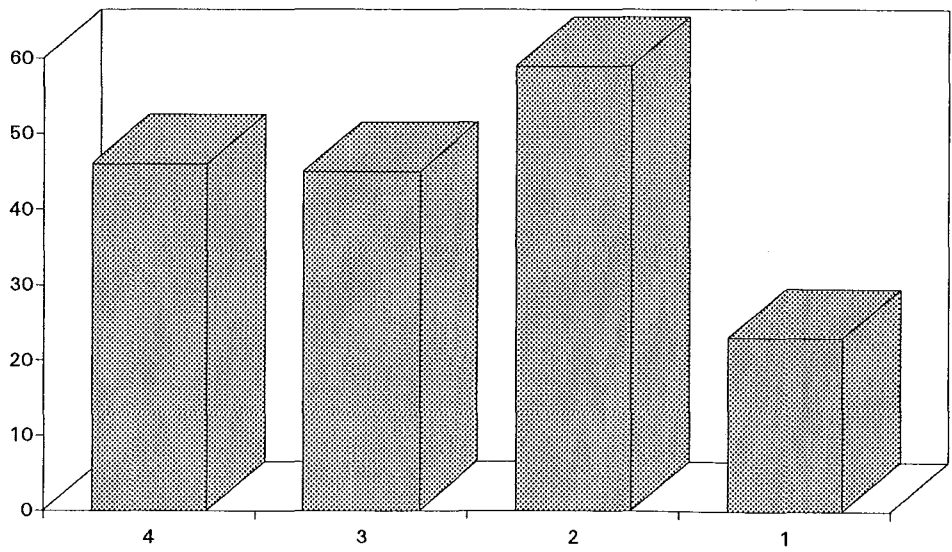


Key

4	Factor A
3	Indifferent
2	Factor B
1	Uncertain

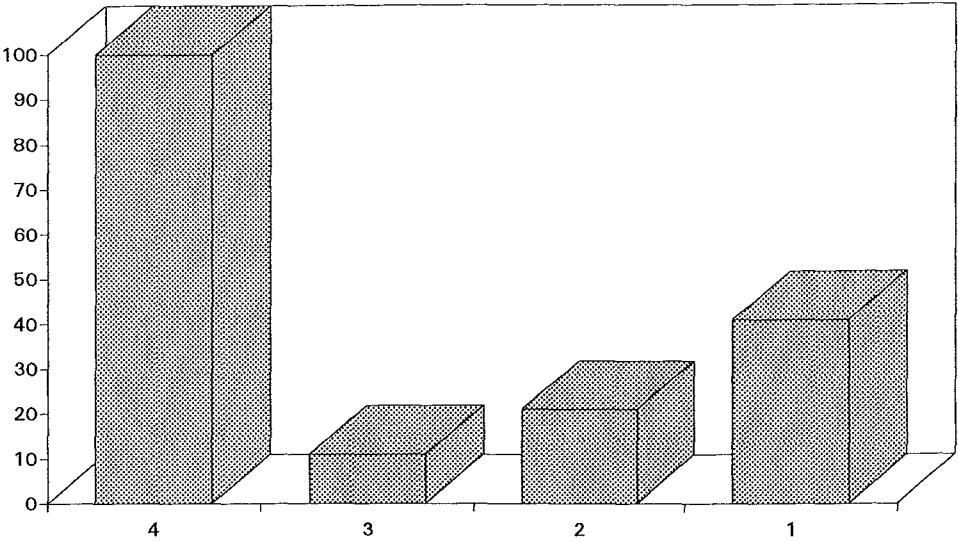
Question 15

4	3	2	1
46	45	59	23



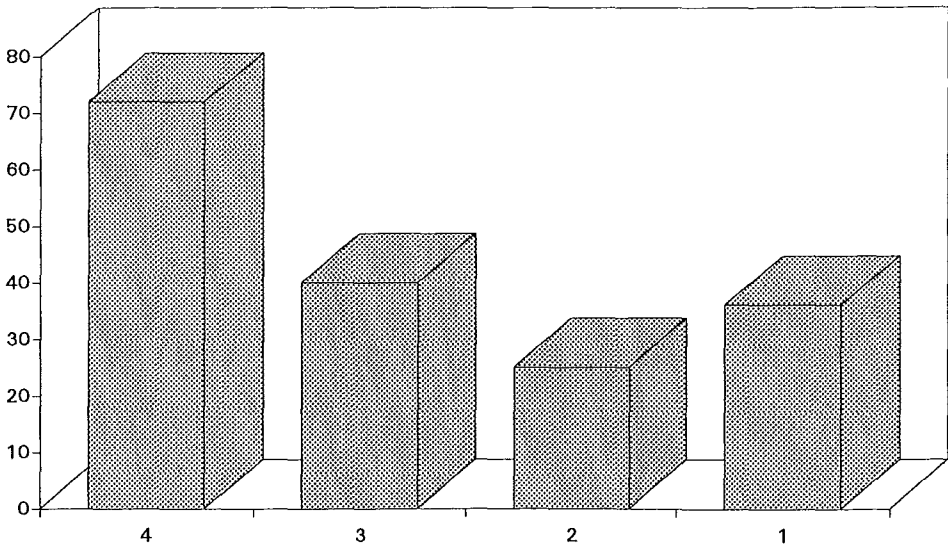
Question 16

4	3	2	1
100	11	21	41



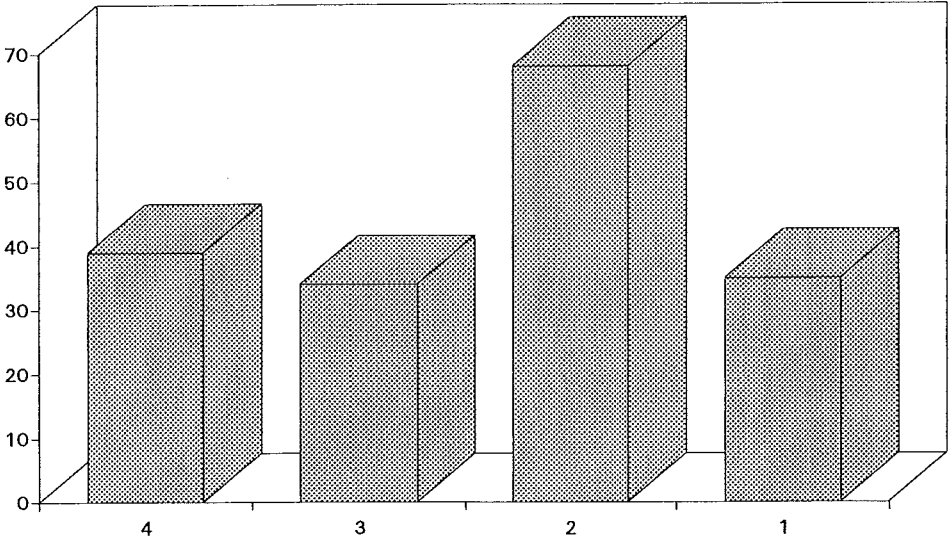
Question 17

4	3	2	1
72	40	25	36



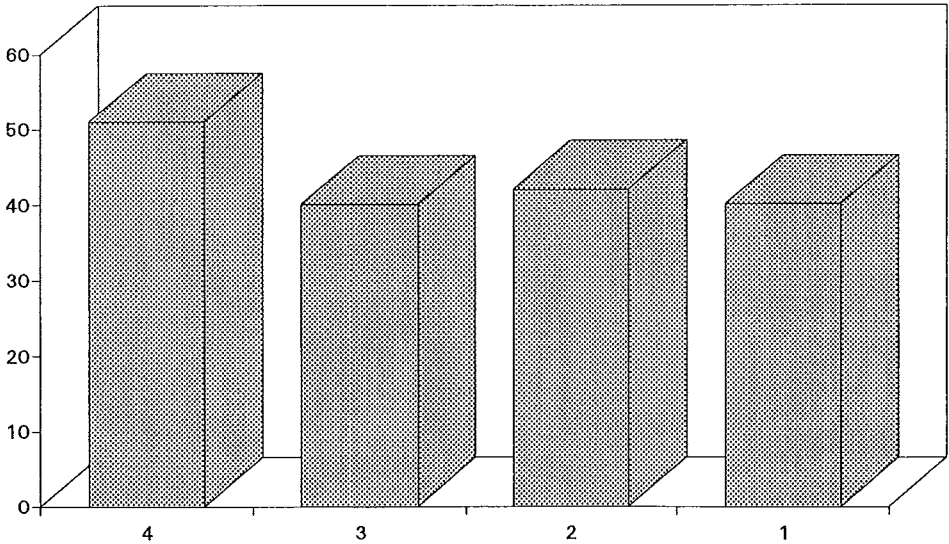
Question 18

4	3	2	1
39	34	68	35



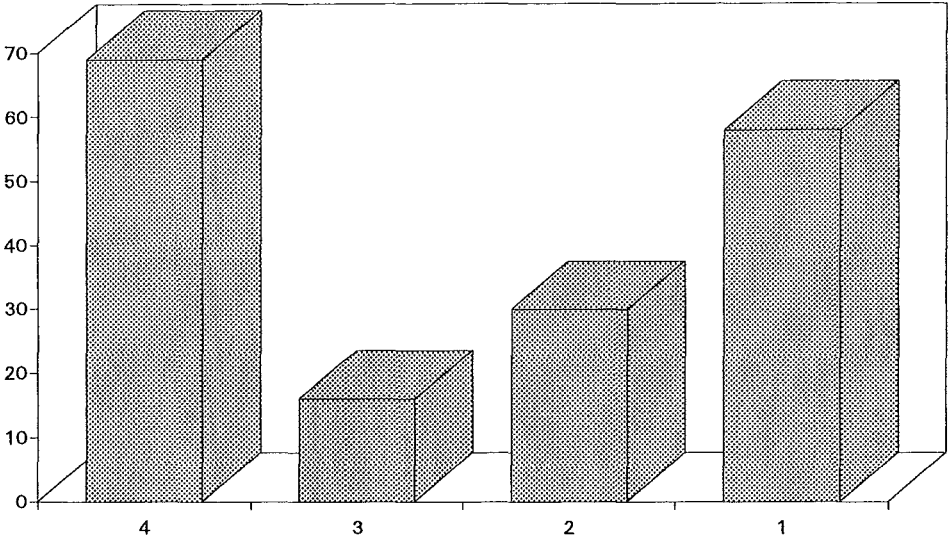
Question 19

4	3	2	1
51	40	42	40



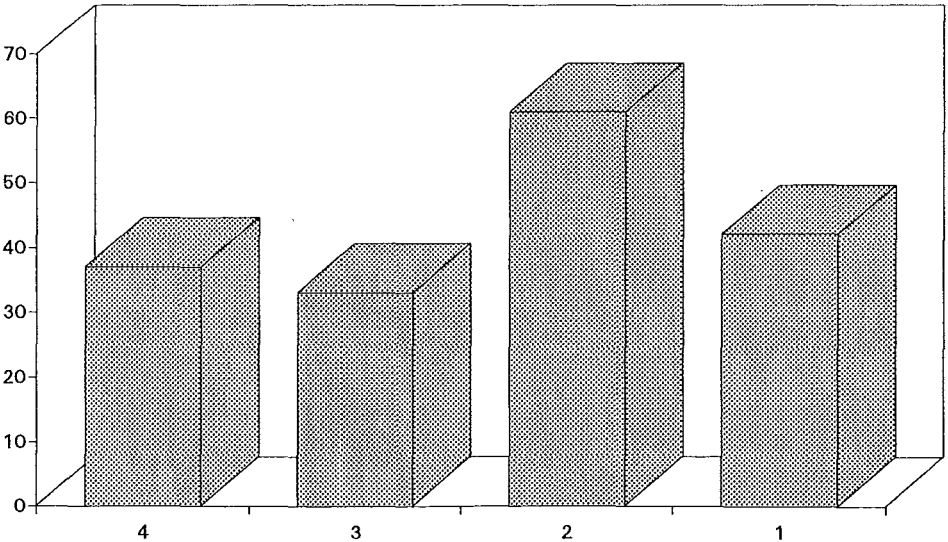
Question 20

4	3	2	1
69	16	30	58



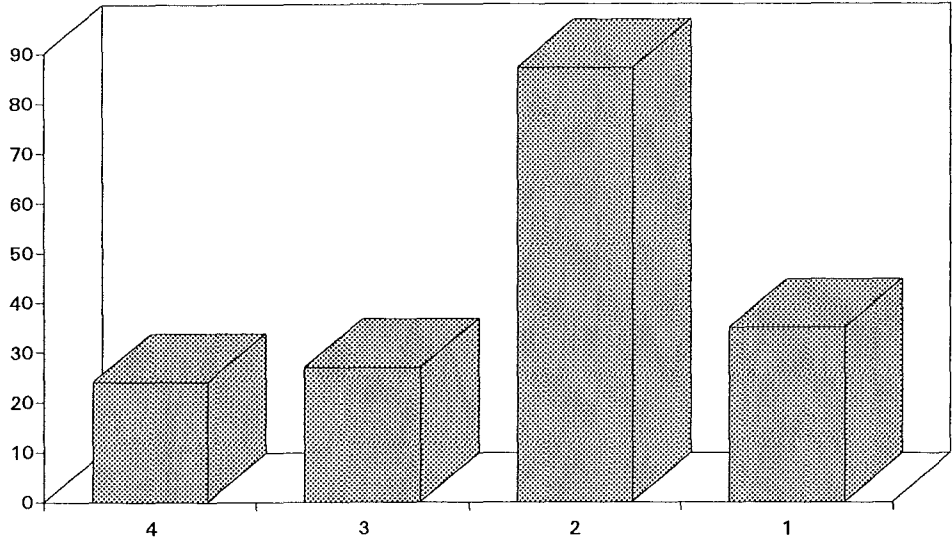
Question 21

4	3	2	1
37	33	61	42



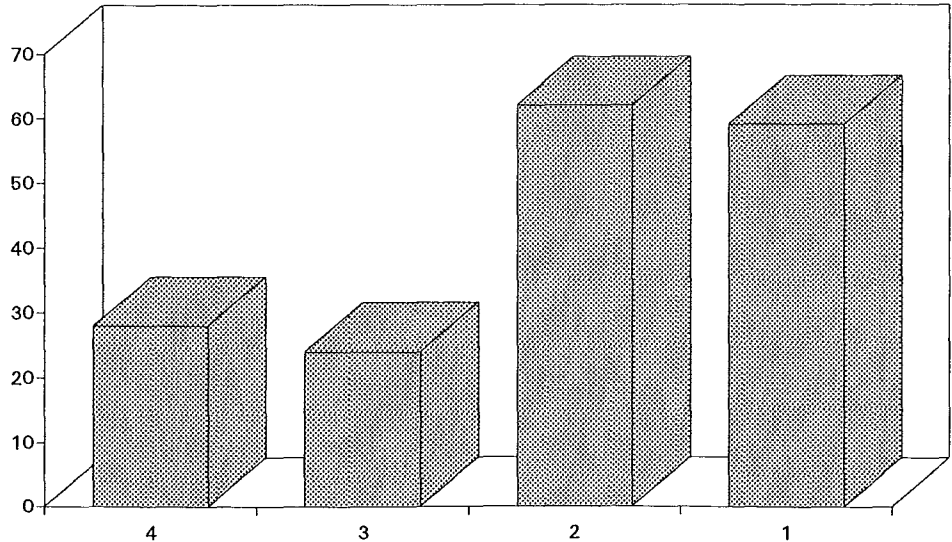
Question 22

4	3	2	1
24	27	87	35



Question 23

4	3	2	1
28	24	62	59



Acknowledgments

Thank you...

Firstly to Peter Alexander. Thanks for the advice and help through-out the year.

To my fellow Masters students for their support and understanding. Particular thanks go to Sue Newberry and Nigel Croke.

Karen Setz for her patience and her realisation that this is actually hard work.

To the Accountancy Department Staff. Without their assistance it would have a lot harder. Particular thanks go to the secretaries, John Hasseldine, Professor Bevan Clarke, Peter Hinchey and Brendan Queree.

Much appreciated....

P.S. The only page on my thesis where I get to write what I want.